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# A Presidential Address

ON THE

# DEVELOPMENT OF OUR KNOWLEDGE OF THE DISEASES OF THE HEART.

*Delivered at the Opening of the Forty-second Session of the Leeds and West Riding Medico-Chirurgical Society on Oct. 24th, 1913,*

BY T. WARDROP GRIFFITH, M.D. ABERD., F.R.C.P. LOND.,

PROFESSOR OF MEDICINE, UNIVERSITY OF LEEDS; HONORARY PHYSICIAN, GENERAL INFIRMARY, LEEDS.

[AFTER thanking the members of the society for the honour conferred on him by his election to the presidential chair Dr. Griffith proceeded as follows:—]

## INTRODUCTORY REMARKS.

During the last ten or twelve years I have devoted much time to the investigation of the disorders of the circulation by means of those graphic methods which the astuteness—I had almost said the genius—of James Mackenzie has brought within the reach of the profession. Some of the results of my efforts I have ventured to bring before you from time to time, and the way you have received them has encouraged me to hope that you will not consider I am trespassing on your good nature if the same note is recognised in a part of the remarks I have to make to-night.

When one is trying to keep abreast with the pioneer work of others so that one may intelligently admire the architecture of the structure they are raising, or when perhaps one is trying to help forward the work, it may be by the mere carrying of bricks and mortar, it is wise, I think, to turn at the same time to the work of the earlier observers in the same field of labour, to get to know and to appreciate what they have achieved, and so to mark the steps of the progress of knowledge.

I have therefore been paying some attention to the writings of such men as Morgagni, taking that part of his "De Sedibus et Causis" which deals with diseases of the heart, of Allan Burns, and of Corvisart. I have studied with care that volume of Laennec's work on mediate auscultation which deals with the circulatory system, which of course is epoch-making. This has led me to the able works of John Elliotson and of James Hope, and these have been followed by some of the writings of Gairdner, of Balfour, and of many others among the Victorians.

Since the publication of his views as to the circulation of the blood by Harvey in the year 1628 our knowledge of the diseases of the heart appears to me to have progressed along natural lines. There have been the careful recording of symptoms and painstaking observations in the post-mortem room. On the clinical side there came the assistance obtained by percussion, which, though introduced by Auenbrugger, was mainly developed by Corvisart and subsequently by Piorry; then there came the use of the stethoscope, which was not, of course, the beginning of auscultation. On the pathological side, or rather on the side of morbid anatomy—for pathology was largely speculative at this time and not, as in these latter days, wisely or intelligently speculative—there came the assistance derived from histology. This was followed by the invention of the sphygmograph, an instrument very disappointing to those who expected too much from it, and which in this respect is sometimes unfairly judged, and by various instruments for the measuring of blood pressure. More and more, since the invention of the sphygmograph, experimental physiology has come to throw light on the path which clinicians ought to tread. The work of Gaskell on the reptilian heart and of others on the heart of the mammal has been pressed into the work of the clinician; and as a practical outcome of this we have the polygraph and the electrocardiograph. Something has been done by the use of the X rays, and with the perfecting of the orthodiagraph more may be expected.

A brief reference to the work achieved by some of the great men I have mentioned may be of interest.

## MORGAGNI.

Giovanni Battista Morgagni, the celebrated professor of anatomy at the University of Padua, was born in the year 1682, and his great work on the Seats and Causes of Diseases appeared in the year 1760. Here we find a wealth of interesting observations made in the post-mortem room.

Cartilaginous and osseous transformation of the pericardium is described; and under the heading of thickening of the pericardium Laubius is credited with having noted an example where the membrane was as thick as a man's thumb. As bearing on what many of us must have noticed—namely a complete obliteration of the pericardial cavity without any history of symptoms during life—he quotes that "assiduous and cautious man, Albertini," as saying that if palpitation and intermission of the heart *do* occasionally occur in this affection, it is in consequence of some associated condition such as enlargement of the heart.

This remark pleased me very much, for I have been in the habit of teaching my students that mere adhesion of the pericardium, even when universal, is a condition which cannot be diagnosed. I have been careful to say that, in making this statement, I have had in my mind an adhesion comparable to that which exists between a postage stamp and the envelope to which it is fixed. When one's skin is dry one can move oneself about within one's garments, and the movement takes place between the skin and the innermost fabric. When, on the other hand, the skin becomes moist, as from exercise, the only difference which occurs is that the movement takes place between the innermost garment and some of the others. So it is with the heart, which will move almost as freely as in the natural state, in what may be termed the outer pericardial sac, formed by the pleura, when the true pericardial sac is completely obliterated. It is when this outer or false pericardial sac is obliterated, when the margins of the lungs are bound down by adhesions and are not able nimbly to compensate by expansion and forward movement for that diminution in the size of the heart which occurs during systole, that the diagnosis becomes more possible, but it is the *outer* adhesions and not the *inner* that we diagnose.

He describes ossification of the mitral valves with narrowing of the aperture and regurgitation, and the remark which follows—namely, "hence the right chambers of the heart are dilated"—is significant, for Allan Burns, writing some 50 years later, does not seem to see any connexion between enlargement of the heart and narrowing of the valvular apertures.

His views on polypus of the heart are sound, and he says that these are formed of the same substance as the crust which is seen on the surface of blood that has been drawn and allowed to coagulate.

Displacements of the heart, contraction of the pulmonary artery, aneurysms of the heart—which to him, however, meant no more than dilatation of one of the cavities—and ruptures all occupied his attention. It is clear that he saw examples both of benign and of malignant endocarditis, an instance of the latter being associated with gonorrhœa, which is a well-known cause of this affection.

He says that intermissions of the pulse may be associated with long life. He notes the appearance of venous pulsation in the jugulars, which was regarded by Lancisi as distinctive of dilatation of the right side of the heart, but which Morgagni said might occur without there being any dilatation. He said, as is most true, that this is easy to distinguish from the pulsation of the carotids, which is very interesting, as I gather that Corvisart thought they might readily be confounded, while Laennec regarded the distinction as easy if care were taken. He even distinguishes between pulsation due to the action of the ventricle and that due to the action of the auricle, for the former is, he says, synchronous with the pulse and the latter is not.

Finally, it is to Morgagni that we owe the first account of a case with an unduly infrequent pulse, complicated with losses of consciousness and epileptic manifestations, and we now know that "my fellow citizen, Anastasio Poggi, a grave and worthy priest," in all probability was afflicted with what we now term "heart-block."

Truly a big man, this Morgagni.

### SENAC.

The great work of Senac on the structure of the heart, on its action and on its diseases, was published in the year 1749. It is the second edition to which I have had access. It bears the date of 1783, but it appears to have been submitted to the Royal Academy of Sciences in the year 1773. The dedication, therefore, which is to the King, I take it is addressed to Louis XV.—that is to say, to Louis the "Well beloved," concerning which Royal Surname of Honour it will be remembered that Carlyle says President Hénault takes occasion in his sleek official way to make a philosophical reflection, which I shall not trouble you with.

This treatise by Senac is full of interest. There are many speculations in it as to the causes of the movements of the heart and the orderly contraction of its chambers. He credits the venæ cavæ with contractile power, and considers that they drive the blood into the right auricle. The double impulse or shock which may be experienced by those who either have cardiac disease or suffer from palpitation, and which amounts to this, that one is sensible of the systole of the ventricle and the shock of the semilunar closure, he attributes to the alternate action of the auricle and ventricle.

Looking at this portrait I seem to have before me a man of keen intellect, inscrutable and somewhat sarcastic. I think I should like to know exactly what was in his mind when in the dedication to which I have referred he wrote: "Four kings of your august race have extended to the Science of Medicine the most marked protection; but that which Saint Louis, Charles the Eighth, Henry the Fourth, and Louis the Fourteenth have merely sketched in outline it has been reserved for your Majesty to accomplish."

Within 12 months this same Louis was stricken with his second attack of small-pox, and was lying betwixt life and death in his Château of Versailles. Should supreme unction be administered? "Not unless Dame du Barry leave the palace," said the priests, and Louis did not want her to go—*provided he was going to recover*. Let us pass from this awful scene so vividly pictured for us in Carlyle's great work.

### ALLAN BURNS.

The well-known treatise of Allan Burns possesses the merit of conciseness and brevity. It was published in 1809, the year which saw the birth of Gladstone, of Tennyson, and of Darwin.

In this work I note an instance of a pulse beating no more than 11 times a minute. He discusses the possible utility of the inhalation of oxygen in congenital malformation of the heart, but does not anticipate much good from it. He comments wisely on the distinction between pericardial effusion and dilatation of the heart.

He gives an excellent description of mitral stenosis, but regards the condition as congenital, which it probably never is. He describes a case in which there was mitral regurgitation "with a hissing sound as of several currents meeting," audible apparently only to the patient. He mentions the case of a girl aged 16, who died suddenly from aortic disease, and clearly attributes the death to the regurgitation. Finally, I should like to mention his valuable comment on the frequency of great abdominal pulsation without any organic lesion.

### CORVISART.

Among those who have contributed to our knowledge of the morbid anatomy of the heart an honoured place must be accorded to Corvisart, whose book appeared in 1806 and was translated into English by Hebb in 1813.

After mentioning the division of the subject he intends to observe, he makes the following pregnant observation: "I cannot disguise one serious inconvenience arising from this arrangement; that of being precluded from treating under the same class on inflammation of the pericardium and that of the heart." From time to time prophets have arisen to tell us that diseases seldom confine themselves to the valves, to the pericardium, or to the myocardium; but that they usually attack two of these or all three with a special incidence on one or the other. This, as we have seen, is no new discovery, but there is great justification for the lesson being retaught from time to time. Corvisart, however, is sound on the subject, for he treats of "carditis" as "a disease which affects at one and the same time the different tissues of the heart."

He makes a greater effort than his predecessors to correlate clinical symptoms with the findings of the post-mortem room. Commenting on the title of Morgagni's work—"The Seats and Causes of Diseases Investigated by Anatomy"—he says he would like to see a treatise on "The Seats and Causes of Diseases by the Investigation of Distinctive Signs, and *Confirmed* by Anatomy," but for this he says "another Morgagni is required."

He appears to have employed percussion as a valuable means of determining the size of the heart. He diagnoses narrowing of the mitral valve, describing "a peculiar rustling, perceptible to the hand when placed on the præcordial region, and

which doubtless proceeds from the difficulty which the blood experiences in passing through the narrow aperture." Laennec accords to Corvisart the full credit of being the first to describe this sign, and he gives to it the name of the *frémissement cataire*.

Talking of aneurysms of the heart, he makes it quite clear that he grasps that these, as hitherto spoken of, are not the same as aneurysms of the vessels, and to make this certain he describes a true case occurring in a negro. How strange it is that while this astute observer hesitates to admit syphilis as a cause of aneurysms, he should confidently attribute them to herpes and to itch.

Commenting on the possibility of sphacelus of the limbs being due to aneurysms of the heart and large vessels, he says: "Fabricius Hildanus has induced Senac and Lancisi to adopt this view," but it is clear that he does not agree with these observers. Here we must remember that it was not until the middle "fifties" that the researches of the great Virchow had put the pathology of embolism on a firm basis, and in this way illuminated the connexion.

Again, he says he does not agree with those who would credit heart disease with any part in the causation of cerebral hæmorrhage. We *now* know that between heart disease and cerebral hæmorrhage there is a double bond—that which arises from embolism, and that which, springing from hyperpiesis, leads to the condition in which weakened vessels are at the mercy of a hypertrophied heart. By the superficial resemblance between venereal warts and the fungating masses found on the valves in what we now know to be cases of infective endocarditis, he was led to regard these two conditions as identical.

It is impossible for me to comment more fully on the great contributions to our knowledge of cardiac disease which we owe to Corvisart. With a spice of personal feeling which one can well appreciate, he says in his Preliminary Discourse: "All that has been done and said on organic diseases of the heart since the publication of this work has sufficiently avenged me for the pitiful reproach which has been cast upon me that I saw diseases of the heart everywhere."

Let the thoughtful physician who is interested in diseases of the heart take comfort from these words; he himself will know that he is less likely to diagnose organic disease when it is not present the more he studies the subject. Let the enterprising surgeon also, to whom it may be sneeringly said that a passing stomach-ache means a duodenal ulcer or an offending appendix, or both, take comfort and encouragement from these words, and from other more tangible sources of consolation!

## LAENNEC.

That great exponent of auscultation, Laennec, was born in 1781 at Quimper; he was a pupil of Corvisart; he became chief physician to the Necker Hospital in 1816, and died of phthisis in the year 1826 at the early age of 45. His great work on Mediate Auscultation was published in 1819. It is to the third edition, edited after his death by his cousin Meriadec Laennec in 1831, that I have had access.

Laennec was not the first to conceive of the possibility of using the ear to diagnose the diseases of the body, nor did he invent the art of auscultation. There is a familiar quotation from Hook in his "Method of Improving Natural Philosophy," written in 1705, which runs thus: "Who knows but that, as in a watch we may hear the beating of the balance, and the running of the wheels, and the striking of the hammers, and the grating of the teeth, and multitudes of other noises; who knows, I say, but that it may be possible to discover the motions of the internal parts of bodies, whether animal, vegetable, or mineral, by the sound they make; that one may discover the works performed in the several offices and shops of a man's body, and thereby discover what engine is out of order"? He also says: "I have been able to hear very plainly the beating of a man's heart."

"The motions of the heart," says Corvisart, may be heard, if we can believe some authors, at a considerable distance. I have never myself heard these beatings far off, but by attentively listening near I have often heard them very distinctly." Burns describes a case of a Dr. Brown, to which I have already referred, where, in association with mitral disease, there was a hissing sound which was attributed by Rutherford to the regurgitation of blood.

Laennec stands out not only as the inventor of the stethoscope, but as the man above all others who has been the means of bringing the art of auscultation to its present degree of perfection.

Now, it is a remarkable thing that the employment of auscultation should have led Laennec to the enunciation of a grave cardiac heresy. He correctly attributed the first sound of the heart to the contraction of the ventricles, but he fell into the mistake of attributing what we know as the second sound to the contraction of the auricles. This, of course, involved the further fallacy—namely, that the pause of the heart followed the contraction of the auricles and not that of the ventricles.

This doctrine remained unchallenged for nine or ten years, till Turner, of Edinburgh, supported by the authority of the older physiologists—Haller, Harvey, and Lancisi—as to the sequence of the contraction of the chambers of the heart, and by his own observations on the pulse in the jugular veins, pointed out that the ventricular contraction came after that of the auricles, and that therefore the sound which was heard just after that attributed to the ventricles must be due to some cause other than the contraction of the auricles. It was, I think, reserved for Dr. James Hope to clinch, by a remarkable series of experiments conducted in 1830 and 1831, the accuracy of the views of Turner, but, like the gallant Englishman he was, he yielded to Bouillaud and Rouanet the credit of showing that the second sound is due to the closure of the semilunar valves.

In a eulogy on the work of Laennec, Hope says it is remarkable how little this great fallacy vitiated the conclusions which he drew. This is indeed the case, for he diagnosed mitral stenosis, as we do, on the presence of a diastolic bruit leading off from the second sound, or as he thought replacing it. *We* know that this bruit is due to the vigorous flow of blood into the ventricle on the cessation of its contraction, and before the auricle enters into systole; *he* attributes it to the auricle driving the blood through the narrow aperture. *We* know of course that this active contraction is the cause of that bruit which is nearly always cumulative and crescendo in character, which runs right up to the first sound and is commonly described as presystolic, which it *usually* is, and auriculo-systolic, which of course it *always* is.

His description of the bruit de soufflet, the bruit de râpe, and the bruit de scie in the heart and arteries

will stand for all time. At first he attributed these to organic lesions, such as narrowing of the orifices and roughening of the arterial walls; and he appears to have narrowly escaped giving the correct explanation in consequence of encountering two difficulties—first, he was puzzled by finding these sounds present when the heart was apparently normal; and, in the second place, he appears to have been unduly influenced by the experiments of Erman of Berlin, on the sounds produced by a contracting muscle. In this way he entirely failed to grasp that regurgitation through an orifice would cause a bruit, though, as we have seen, this was known to Burns.

He describes with accuracy the sound we know as a cardio-pulmonary bruit, and correctly explains that it is due to the movement of the air in the lungs caused by the movements of the heart. He refers tentatively to the possibility of there being a frémissement in the internal jugular vein, which we now recognise with certainty.

His distinction of the true intermissions from the false is in full harmony with our present views. He describes a form of intermittence where after the second sound—which we must remember is attributed by him to the contraction of the auricles—he hears the *auricle contract several times*. One might think he was here describing a case of heart block; but it is clear that these sounds were due to one or more extra systoles of the ventricle in which each extra systole was responsible for one or two sounds, according as it did *not* or *did* open the aortic semilunars.

Both he and Corvisart regard hypertrophy of the heart as a disease; this, of course, it never is. Hypertrophy is an honest effort on the part of the heart to do the extra work which is required of it; a hypertrophied heart is sinned against rather than sinning. Thus Laennec says: "As for ossification of the valves, aortic or mitral, and excrescences placed upon them, for the most part they do not trouble the health until they arrive at such a stage as to cause hypertrophy and dilatation of the ventricles"; and yet he does not see the fallacy of attributing the symptoms to the conservative development of hypertrophy.

His description of the different signs which are produced by hypertrophy of the right and the left ventricle respectively are admirable; and I sometimes think we are apt to overlook the common-sense view of the differences, which it is natural to suppose there *would* be, between enlargement of the right and left sides of the heart.

One cannot rise from a study of the work of Laennec without being impressed by its splendour and without feeling "this was the greatest Roman of them all."

### ELLIOTSON, HOPE, CORRIGAN, AND BALFOUR.

In 1829 and in 1832 respectively there appeared the Lumleian lectures of John Elliotson and the treatise on the diseases of the heart and great vessels by Dr. James Hope. The former follows Laennec in his views as to the sequence of the contraction of the cardiac chambers. The great credit of the latter is that he demonstrated their inaccuracy. He also appears to me to state what is actually the modern view of the "*veine fluide*" in regard to the production of bruits as follows: "The mitral and tricuspid valves, instead of opening into tubes of their own dimensions, as in the case of the aortic and pulmonary orifices, open generally with more or less infundibuliform projection, into spacious cavities; and as the blood, on its delivery, must diverge to fill these cavities, it forms in this act various whirls, eddies, and counter-currents which I conceive to be the cause of the sound."

Probably there is no name more familiar to the student than that of Sir Dominic Corrigan, and this of course on account of the jerky pulse which is named after him and which indicates regurgitation through the aortic valve. His paper appeared in the *Edinburgh Medical and Surgical Journal* on April 1st, 1832. The title of the paper is "On Permanent Patency of the Mouth of the Aorta, or Inadequacy of the Aortic Valves," and he says in introducing the subject: "The disease to which the above name has been given has not, so far as I am aware, been described in any of the books on the diseases of the heart." Now in this he is not accurate. Corvisart gives an excellent description of a case in which the aortic valves were diseased in such a way that there must have been both stenosis and regurgitation. Both Bertin and Laennec describe the shrinking of the aortic valves with the rolling up of the segments, sometimes towards the ventricle and sometimes towards the artery, a condition necessarily associated with insufficiency of the valve. If it be argued, as indeed it may, that none of these writers specifically mention that the valve was incompetent, and that *herein* lies the originality of the observation of Corrigan, the case mentioned by Burns must be brought forward in which death is explicitly attributed to the regurgitation.

It was Corrigan, however, who first pointed out the characteristic features of the pulse in cases of aortic regurgitation. The exact cause of the phenomenon, described with perfect accuracy by this distinguished observer, has in my opinion been grievously misstated by most writers; but a discussion of their views must not detain me now.

Probably there is no better book of its kind, and certainly no more honest book, than that which was written in 1876 by Dr. G. W. Balfour, of Edinburgh. Balfour, who was an uncle of Robert Louis Stevenson, died in 1903 at the age of 81. He brought out a third edition of his book in 1898, and only a few years before his death, being, like Alan Breck, a "bonnie fechter," he came into the arena to support his well-known view that it is *common* for the dilated left auricle to be felt to pulsate towards the inner end of the second left intercostal space, and that many of the systolic bruits audible in this area, which he refers to as the region of cardiac romance, are of mitral regurgitant origin and are transmitted to the surface through the medium of the left auricular appendix. Dr. John Cowan has lately shown me a tracing which would appear to indicate pulsation due to the left auricle at the inner end of the second left interspace. I am convinced, however. that pulsation at this spot is due in the overwhelming majority of cases to conditions apart from direct auricular action. In my opinion, the larger the left auricle is, the less likely are we to be able to detect it either by palpation or by percussion; and for this reason—namely, that the very conditions which cause enlargement of the left auricle, such as mitral stenosis or mitral regurgitation, are precisely those which also cause enlargement of the right ventricle, whose conus arteriosus completely buries the left appendix. Upward increase of the cardiac dulness to the left of the sternum therefore is due in most cases to the enlarged conus arteriosus, and never, in my opinion, to enlargement of the left auricle.

### THE POLYGRAPH.

Though the venous pulse in the neck has been recognised for more than 200 years, and, as we have seen, Morgagni discriminated between auricular and ventricular influence in its production, it was not, I think, till the year 1863 that Bamberger and Marey obtained tracings of this pulse. Though there have been many workers in the field since then—and among these may be mentioned my old teacher in anatomy, Sir John Struthers, who did good work on the valves in the veins at the root of the neck—it is to James Mackenzie that the credit must be given of having brought the routine examination of the jugular pulse to its present state of utility in the study of cardiac disease. By means of his polygraph he takes, as you will remember, simultaneous tracings from the radial pulse and from the pulsations over the situation of the jugular bulb, which usually gives a record of the carotid pulse as well.

[The use of the polygraph was then explained; the significance of the *A*, *C*, and *V* waves was dwelt upon. The occasional presence of an extra diastolic wave, as described by Hirschfelder and A. G. Gibson, was mentioned; and the method of estimating the conductivity of the bundle of His by the length of the *A-C* interval was detailed.]

It will be noted that by the limited use of the polygraph I have described, we are comparing the times of contraction of the *right* auricle and the *left* ventricle, and that the conclusions I have asked you to agree to are therefore based on the assumption that the two auricles and the two ventricles contract simultaneously. Into the evidence that this is the case I need not enter. There may be exceptions, but they do not interfere with the conclusions I have to draw this evening.

### THE ELECTROCARDIOGRAPH.

The investigation of the action of the heart by means of the electrical currents which are produced by its contraction has proved so fertile in result that I should like to lay before you the principles on which this method is based.

[The electrical changes occurring in a muscle over which a wave of contraction passes were described, that part of the muscle where active contraction was going on being relatively negative to the portions at rest. The current thus generated could be demonstrated by the galvanometer and by the rheostatic frog experiment. The observations of Kölliker and Müller in 1856, of Augustus D. Waller, and of Bayliss and Starling were also referred to. The application of these principles in the string galvanometer of Einthoven of Leipzig was then explained, and some records from the published works of Dr. Thomas Lewis were shown on the screen.]

There is no one in this country to whom we are more indebted for a knowledge of what can be learned from the use of the electrocardiograph of Einthoven than Dr. Thomas Lewis, who has been working at the research laboratory attached to University College, London, and in direct communication with the wards of the hospital. I trust the time is not far distant when, under the supervision of Professor Birch, we may have an installation at the medical school of our University in good working order and in electrical communication with the wards of the infirmary, by means of which the action, the irregularities, and the other vagaries of the hearts of our patients may be registered with accuracy.

The results obtained by the string galvanometer confirm those obtained by the use of the polygraph as to the relative time of the contraction of the auricles and the ventricles, but they go further than this.

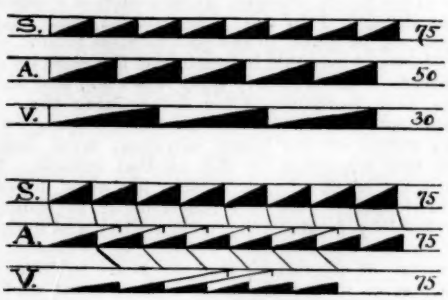
Although the primitive cardiac tube has in the course of its development lost much of its pristine character and is wonderfully distorted in adaptation to its function, yet the part where the contraction of the heart begins and the course of the wave of contraction can be demonstrated. The position where the different varieties of premature contractions arise can be, in great part, determined; and it has been the means of proving that the commonest form of cardiac failure—that, namely, which is accompanied by the presence of complete arrhythmia of the organ — is associated with fibrillary contraction of the auricle. Not only can the precise time and duration of the various events be gauged, but the tension of the filament may be so regulated that a deviation of one millimetre on the photographic plate corresponds to a current of 1/10,000th of a volt.

### THE CARDIAC RHYTHM.

Before bringing to your notice some of the results obtained by the use of these two instruments in disordered conditions of the cardiac rhythm (and perhaps I may be allowed to say that all the polygraph tracings I shall show are the result of my own work), I must remind you that it is held, and has, I think, been well established, that all parts of the heart are capable of building up stimulus and contraction material; that when this material reaches what I may term the flash-point all the contraction material is exploded in that portion of the heart; and that immediately thereafter the bankrupt cardiac tissue begins afresh to build up stimulus and contraction material.

Now the rate at which stimulus and contraction material is built up varies in the different portions of the heart, and it may be that, apart from this, the flash point is more rapidly reached in one part of the heart than in another.

Experiments on the same principle as the Stannius ligatures show that in the case of the heart of the reptile each of the three parts of which it is composed—namely, the sinus, the auricle, and the ventricle—continues to beat when it is cut off from the influence of the other portions, and that the rate is different in the case of each. There are




The length of time occupied by the contraction of the various parts of the heart is not expressed in this diagram, and the building up of stimulus and contraction material is therefore represented as starting from the commencement of contraction of each part instead of from the ending.

many considerations which lead us to believe that the same thing prevails in the heart of the mammal.

In the upper of the two diagrams (see figure) shown on the screen I have assumed that we have a heart which in the region of what corresponds to the sinus of the reptile—that

is, about the junction of the superior vena cava and the auricle—is building up its stimulus material at such a rate that the flash point is reached 75 times a minute; that the auricle is doing the same at the rate of 50 times a minute, and the ventricle at the rate of 30 times a minute. But in the normal condition the different chambers of the heart are not left to themselves; whenever a contraction occurs in the region of the sinus it is with great rapidity transmitted to the auricle, which, as the second diagram shows, contracts before its stimulus material had reached its own specific flash point. The contraction of the auricle originates a stimulus which is transmitted by the bundle of His, taking an appreciable time, to wit, about one-tenth to one-sixth of a second, to cross the bridge. The magazine of explosive material which is accumulating in the ventricular muscle is therefore discharged long before its own flash point is reached; it immediately begins afresh to lay up a new supply of explosive material, which is again ignited by the next message from the auricle.

Clearly, therefore, that part of the heart which builds up its stimulus material most rapidly, or where the flash point is soonest reached, will be master of the situation and will set the pace for the whole heart. In the mammalian heart this part is at the junction of the superior cava with the base of the appendix of the right auricle; at the beginning of each successive beat of the heart this part becomes electrically negative to all other parts of the cardiac musculature. Here, therefore, the contraction begins; it is the peacemaker, and as *it* pipes so must the rest of the heart dance under ordinary circumstances.

### CONCLUDING REMARKS.

[After a series of tracings had been thrown on the screen to illustrate the different forms of cardiac irregularity Dr. Griffith concluded as follows:—]

The observations I have ventured to bring before you may serve to show the lines on which cardiac investigation is progressing. These modern methods should in no wise be regarded as taking the place of the older methods. Rather they should stimulate us to the more thorough investigation of symptoms and signs, and to the more careful study of the appearances found in the post-mortem room.

The most valuable indication of the capacity of a heart for work is clearly what it can do; and one of the best instruments for determining this is a staircase! If there is anything wrong with the valves of the heart salvation must depend on the condition of the cardiac muscle. The capacity of the heart muscle for work depends, however, upon its five functions of rhythmicity, excitability, conductivity, contractility and tonicity. These are the five links in the chain of cardiac integrity. If we can subject the heart to an examination as to its condition in respect of each of these functions we may be able to discriminate between forms of cardiac failure, which, though apparently identical, are really distinct; and it may be that in the future these causes may call for different forms of treatment and not call in vain.

This will be a sufficient answer to anyone who may be disposed to ask, "What is the good of all this?" It will not be necessary to fall back on the mathematician's toast: "Here is to pure Mathematics—and may they never be of use to anyone"; for Michael Faraday has supplied a better answer. He had just delivered one of his popular lectures, dealing, as he alone could, with some of the problems of electricity. At the end of the lecture a lady said to him: "Yes, Mr. Faraday, this is all very interesting and curious; but pray what *use* is it all?" "Madam," said Faraday, "what is the use of a baby?"

And now, Ladies and Gentlemen, it only remains for me to thank you for your kindness and for your great patience. Perhaps I might be thought guilty of exaggeration if I were to exclaim—

> "Joy, joy for ever! My task is done;
> The gates are passed, and Heaven is won."

Certainly it would at this stage of the session be premature; for it is written, "Let not him that girdeth on his harness boast himself as he that putteth it off."

My present frame of mind may best be understood by you if I remind you that in the old days, before the opening of the great bridges over the Tay and the Forth, the traveller from the north who desired to reach the south by the East Coast route, and avoid the circuitous journey by Perth and Stirling, had on reaching the Tay to leave his train and cross that estuary into a crazy ferry boat. He then had to get into another train and traverse the Kingdom of Fife, after which a similar, but longer and more exposed, crossing had to be made of the Frith of Forth, before even Edinburgh was reached. One raw day in the month of March there arrived at the Waverley Station an English traveller, haggard, and bearing the marks of privation and of exposure. He hailed a porter and asked when the train for the south was due to leave. The porter, knowing what was expected of him from a study of all the English guide books to Scotland, replied of course by asking another question. "Hoo far are ye goin'?" "Oh!" said the traveller, "I am going to China; but thank goodness the worst of the journey is over."

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ABSTRACT OF

# The FitzPatrick Lectures

ON

# ASTROLOGY IN MEDICINE.

*Delivered at the Royal College of Physicians of London,*

BY CHARLES A. MERCIER, M.D. LOND.,
F.R.C.P. LOND., F.R.C.S. ENG.,
LATE PHYSICIAN FOR MENTAL DISEASES, CHARING CROSS HOSPITAL.

## LECTURE I.

*Delivered on Nov. 6th.*

Dr. Mercier said that the position of astrology among the sciences was unique.

### THE DECAY OF ASTROLOGY.

Its origin was so remote as to antecede all written records: it had formed an important part of the life of every nation that had advanced beyond barbarism; it had been studied with enthusiasm for thousands of years in succession by the Egyptians, the Indians, Chinese, Arabs, Jews, Babylonians, Chaldeans, and European nations, and had engaged the greatest intellects of every age. It had been a necessary part of knowledge for every educated man, and its terms formed part of every existing European language—he cited as instances the words consider, disaster, exorbitant, in the ascendant, under a lucky star, martial, saturnine, jovial, mercurial, Saturday, Sunday, and Monday, lunatic, and venereal disease, which was cured with mercury. These terms were all that remained of a once paramount science and art formerly authoritatively held

essential to the proper practice of medicine. Astrology was now utterly extinct. Its decay began at the Renaissance. It languished during the seventeenth century, the last man of high distinction who then practised it being John Dryden, and its death-blow was given by the biting humour of Jonathan Swift. Sir Walter Scott had used its terms in one of his novels, and there had been no commentator of sufficient knowledge to expose his blunders.

Such a record was without parallel in the history of human endeavour. Only two subjects offered any approximation thereto. The first was alchemy, which included chemistry, though its chief ends were the discovery of the philosopher's stone, wherewith to effect the transmutation of metals, and the elixir of life. But the transmutation of metals, an object of scorn for many years, was now in sight of success. Certain elements were now transmuted, or transmuted themselves, and one at least of the elements known to the ancient alchemists was now made in the laboratory; while the elixir of life within recent times had been discovered by one eminent physician in orchidian extract, and by another in sour milk!

A nearer parallel to the fate of astrology was to be found in Aristotelian logic, which was formerly cultivated with the same universality and fervour as astrology, and was of old time equally an essential knowledge for the practitioner of physic. It had now fallen into neglect and contempt well-nigh as universal as its former cultivation, but, unlike astrology, it was not extinct. The lamp of astrology had utterly gone out, but the expiring flame of logic still flickered precariously in some of the dark places of the earth.

It was because the long sleep of medicine through so many centuries was due in no small degree to the shackles of astrology and of the humoral pathology which astrology countenanced and corroborated, that he thought it proper to bring before the College the elementary principles of astrology and the mode of their application to medicine.

## THE MAIN FACTORS IN ASTROLOGY.

The main factors in astrology were the signs of the zodiac, the seven planets, and the Houses of Heaven. The word "house" had two meanings—it signified a twelfth part of the heavens, and that sign of the zodiac appropriated to a particular planet, which was its "lord." In medical astrology also must be considered the four elementary qualities, heat, cold, dryness, and moisture, corresponding with the four elements, fire, earth, air, and water, and the four humours, blood, phlegm, yellow bile, and black bile. The possible numerical combinations of 12 signs, 7 planets, and 12 houses were obviously multitudinous, and since many combinations depended on vague and arbitrary considerations it was hardly surprising that scarcely any two astrologers should so combine them as to draw the same conclusions from the same disposition of the heavens.

Each zodiacal sign, planet, and house possessed certain special powers and influences over mankind in general and over each individual according to the moment of his birth, according to his complexion, disposition and temperament, and the place in which he lived; also at certain times of life. Each sign and planet had its own elementary qualities, being hot and dry, cold and moist, and so forth, and had special power over some particular part of the body and faculty of the mind. These powers were reinforced and diminished in innumerable ways.

### *The Signs of the Zodiac.*

Dr. Mercier then described the 12 signs of the zodiac in "triplicities" or sets of three according to their several qualities or properties.

The first triplicity—Aries, Leo, and Sagittarius—controlled the hot and dry complexion, the yellow bile humour, the male sex, the day hours, and the period of youth; their lords were Sol by day and Jupiter by night. The second triplicity—Taurus, Virgo, Capricornus—controlled cold and dry, black bile, the female sex, the night hours, and decrepitude; their lords were Venus by day and Luna by night. The third triplicity—Gemini, Libra, Aquarius—controlled hot and moist, sanguine humour, male sex, the day hours, and childhood; their lords were Saturn by day and Mercury by night. The fourth triplicity—Cancer, Scorpio, Pisces—controlled cold and moist, pituitary humour, female sex, the night hours, and middle life; their lords were Venus by day and Mars by night.

The signs also influenced the parts of the body as follows: Aries the head, Taurus the neck and shoulders, Gemini the arms and hands, Cancer the chest, Leo the heart and cardiac end of stomach, Virgo the intestines, stomach, and umbilicus, Libra the kidneys, Scorpio the genitals, Sagittarius the hips, Capricornus the knees, Aquarius the legs, Pisces the feet.

### *The Planets.*

Only seven planets were known when astrology was in vogue, and they were always enumerated in the following conventional order, the origin of which is obscure: Saturn, Jupiter, Mars, Sol, Venus, Mercury, Luna. With respect to most, not all, things they exercised a regulative influence, and with regard to some a causative one. Thus, Guy de Chauliac attributed the "Black Death" of the middle of the fourteenth century to the conjunction of Saturn, Jupiter, and Mars in Aquarius on March 24th, 1345. The planets, like the signs, had jurisdiction over particular things, such as some region of the body, sense, faculty, part of the mind, bodily configuration and mental temperament, time of life, peculiar diseases, and mode of death. The several animals, metals, plants, odours, were also dominated by particular planets. Dr. Mercier then detailed a number of instances of the various objects ruled over by the different planets.

Planets were either benevolent or malevolent in character. The benevolent planets were Jupiter, Sol, and Venus; the malevolent ones, Saturn, Mars, and Luna; Mercury was variable, having little character of his own, but reinforcing the benevolence or malevolence of whatever planet he might be in aspect with—that is, whose rays converged at one or other of certain definite angles to the point on earth that formed the scene of the planetary action. These premisses being granted, it was evident that the course and termination of every malady in a sick person depended on the relative power with respect to other planets of the particular planet or planets having jurisdiction over the matter. They depended on the planet presiding over the particular temperament, the prevailing humour, the part affected, the particular disease, the time of life of the patient, over his nativity, and so forth. Thus, all the seven planets might be influencing the disease and the sick person in different directions at once, some pulling towards health, some towards death. All the relative potencies of the planets under different

conditions and in different relations to the others therefore had to be taken into account.

The power of a planet at any given moment depended on (1) the sign of the zodiac in which it was then situated; (2) that of which it was lord; (3) that in which it "rejoiced"; (4) those in which it ascended and descended; (5) the house in which it was situated; (6) that in which it rejoiced; (7) the position or aspect of the planet towards other planets; (8) the planet's aspect towards the ascendant; (9) the motion of the planet, fast or slow, direct or retrograde; and (10) the day and hour. Further, the estimation of these powers depended largely on the Houses of Heaven in which they chanced to be situated at the time.

### *The Houses of Heaven.*

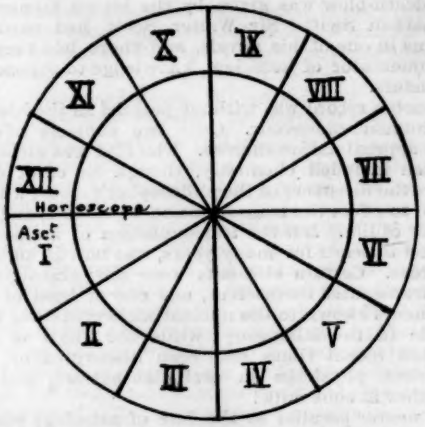
Dr. Mercier then described these houses. The arc of the heavens, viewed from any point on the earth's surface, consisted of two quarters of a circle comprised respectively between the eastern and western horizons and a vertical meridian to the zenith. The arc of the heavens below the earth similarly consisted of two quarters divided by the nadir. If we imagined, he said, each of these fixed quarters of heaven to be subdivided by three equidistant meridians the heavens would then be divided into 12 parts, six above the horizon and six below, whose contents were continually changing, for the planets occupied them all in succession as they appeared to rise in the east and set in the west, completing their revolution below the earth. These 12 divisions were the 12 Houses of Heaven.

The house immediately below the eastern horizon, so that the stars therein were next to rise above the horizon, was the first house, or ascendant. It was the principal and most powerful house, and the planets occupying it chiefly determined the fate of the native. The rest of the houses were known by numbers in order reverse to the movement of the hands of a clock. The second and third were between the ascendant and the lower vertical meridian (nadir); the fourth, fifth, and sixth between that and the western horizon. These houses were below the earth. The seventh, eighth, and ninth occupied the western quadrant, and the tenth, eleventh, and twelfth the eastern quadrant, above the earth.

The anterior boundary of each house—i.e., the meridian which the stars in that house must cross next—was its cusp, and from the cusp the position of the planets in the house was measured in degrees and minutes. The cusp of the ascendant was called the horoscope, and Dr. Mercier here called attention to the inaccuracy of the common phrase, to "cast a horoscope." What was meant by the expression was the casting of a "nativity," or "geniture"—i.e., the setting out on a plan of the Houses of Heaven the position of the signs of the zodiac and of the planets in the respective houses that they occupied at the moment of birth. Similarly, we might cast a decumbiture—i.e., set out a similar plan for the moment at which a disease began; and such an operation was as frequent in the daily routine of an old-time physician as is now the record of the name, age, and dwelling of the patient.

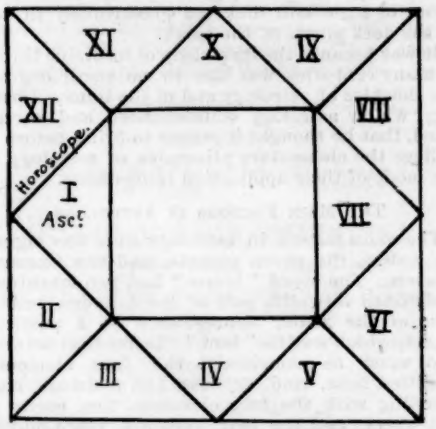
Diagrams on the wall showed the two methods or schemata of houses, on which the position of the signs and planets were set out at the particular time at which the inquiry was made, just as now we had figures of the chest and other parts of the body upon which the various morbid signs existing were noted. The circular method was the best and most obvious, the rectilinear method being probably due to the fact that circles were not so easy to draw as lines. (Figs. 1 and 2.)

FIG. 1.




The chart for dividing the heavens into the twelve houses. The horizontal line represents the surface of the earth at any spot; the arc above it the visible heavens divided into two quadrants of 90° each. Each quadrant is divided into three houses of 30° each. The same process takes place for the under side of the earth. The positions in these two arcs of the signs of the zodiac and the planets are computed astronomically for the time of the figure and marked in on the chart.

FIG. 2.




A rectangular form of Fig. 1, adopted because easier to draw. The signs and planets are marked in as before. A figure thus completed is shown in Fig. 3.

### *The Relations of the Houses.*

Each house, like each sign and each planet, had its special aspect, jurisdiction, or influence over human affairs. Just as Aries was the most powerful sign, and Luna the most powerful planet, so the ascendant was the most powerful house. The power of a planet in the ascendant was paramount over all others, though it might be influenced by them. It was the house of projects, of the beginnings of things, of journeys, of life and movement, and of questions and answers. The relations of the other houses were in part as follows: the second to riches, servants, the end of things, and the declining years of the native's life; the third to brothers and sisters, acquaintances and

friends, heirs, the quiet of kingdoms, religion; the fourth to parents, heredity, the native's birthplace and dwelling, and his fate after death; the fifth to children, eating and drinking, amusements, fighting, vessels; the sixth to sickness and health, servants, animals, gifts; the seventh to women, marriage, contentions, thieves, and middle age; the eighth to death, fear, and the last years of life; the ninth to pilgrimages and journeys, faith, wisdom, and philosophy, books, rumours, and sleep; the tenth to dignities, laws, princes and magistrates, memory, the mother; the eleventh to fortune, good faith, friends and allies; the twelfth to unfriends, bad faith, labour, battles, sadness. These were only a few of the relations, nearly every conceivable event having its allotted home in some house. After the ascendant the other angular houses, fourth, seventh, and tenth, were most powerful; then the second, fifth, eighth, and eleventh; while the third, sixth, ninth, and twelfth were unpropitious and disposed to evil.

*The Influence of the Planets.*

Every planet had one or more zodiacal signs of which it was lord, another sign in which it was said to "rejoice," another in which it was "exalted," and in the opposite of the last it was "depressed." And the power of the planet was increased or diminished according as one or other of these signs was in the ascendant. A hot planet in a hot sign would have its heat augmented, but in a cold sign reduced. A moist planet in a humid sign would be dripping wet and would aggravate diseases due to moisture. Similarly planets had houses in which their power was augmented, others in which it was depressed. But the most important factor modifying the power of a planet was its aspect to other planets and to the ascendant.

An aspect was the distance between two planets as measured by the intervening houses or the angle formed by their rays converging at the spot for which the figure was drawn. The first was the conjunction, when the rays were practically parallel. Planets were said by some authorities to be in conjunction when they were within 2 degrees of each other, by others when within 15 degrees, by others when in the same sign, and by others when in the same house. A planet within 15 degrees of Sol was combust and its powers were abolished. Planets of like qualities in conjunction reinforced one another; if of unlike qualities, each cancelled a part of the other. Thus a good planet was augmented in power by conjunction with another good planet, but diminished by conjunction with an evil one, while the evil of the latter was lessened by the influence of the good planet.

The second aspect was the sextile, when the planets were two signs distant, separated by one-sixth of the zodiacal circle, or 60 degrees; it was moderately good. The third was the quartile, when a quarter of the circle, three signs, or 90 degrees, intervened; it was unfriendly or conflicting. The fourth was the trine, four signs, a third part of the zodiac, or 120 degrees intervening; it was the aspect of perfect benevolence. The last was the opposition, in which a distance of six signs, half the zodiac, or 180 degrees, intervened; it was the most hostile of all.

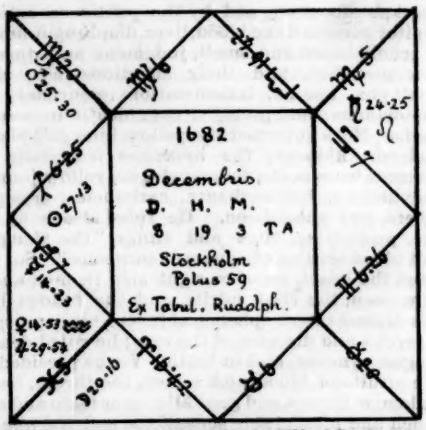
Every planet had two motions—first, that of the general movement of heavenly bodies, rising in the east, setting in the west. Secondly, its own proper motion among the stars, varying in different planets, and sometimes direct, sometimes retrograde, sometimes abolished. The moon completed her course in about 28 days, Saturn in about 29½ years. The motion of the planets was of much importance in medicine, for acute diseases, whose course was rapid, were governed by Luna, whose motion was rapid; while chronic diseases, whose course was slow, were governed by Sol, whose course was slow. If any planet that was regulating the course of a disease should become retrograde in its motion, the patient would, of course, get worse.

Lastly, as to times, each planet dominated certain hours of each day. Thus Saturn dominated the first hour of Saturday, Jupiter the second, and so on. When all the planets had had their hour the roster commenced again. That planet which dominated the first hour of the day dominated also the day itself, subject to the dominance of the respective planets of the hours. Each planet in turn also ruled one day of the week. Every undertaking to which any given planet was propitious ought to be begun at the hour in which that planet was dominant, and if possible on his day. When written directions were given as to any undertaking the planet propitious to that undertaking should be recorded on the directions, so that the undertaking might be begun in the hour of that planet. The planet most propitious for letting blood and taking medicine was Jupiter, therefore all written directions for letting blood or administering medicine should bear the sign with which we in fact to this day begin our prescriptions, the sign of Jupiter— ♐-♃

FIGURE OF A NATIVITY.

Dr. Mercier then presented and commented on a figure of a nativity. For this purpose, he said, it was convenient to select a person whose career was closed, because this gave the double advantage of ascertaining whether our predictions were correct, and also of keeping an eye on his career during the course of our interpretations, so that they might not go too wide of the mark. In the nativity of Charles XII. of Sweden (Fig. 3) he pointed out Sol

FIG. 3.




This scheme of the nativity of Charles XII. of Sweden sets forth the year, the month, the day, hour and minute of birth, and the scheme is erected accordingly and admits of no variation.[1]

[1] There was, however, a process known to astrologers as Rectification of a Nativity, the rules of which were difficult to discover but the practical result was to shift the heavenly bodies from positions that were inconvenient to the astrologer to positions more suitable to his purpose. Emboldened by this established astrological practice, Dr. Mercier had made a trifling alteration in the scheme. As originally erected it referred not to the year 1682, but to the year 1594 and to the

in the ascendant, presaging an illustrious career; Venus in the second house not aspecting the ascendant, characterising him as a despiser and neglecter of woman; Saturn unpropitiously situated in the eighth house, signifying death early and under disastrous circumstances; Mars in the twelfth, indicating a life spent in warfare and death on the field. Jupiter in the second was powerless to counteract the evil aspects of Saturn and Mars, while the moon in quartile to the ascendant indicated the early onset of misfortune. How true the prediction let the poet testify:—

"His fall was destined to a barren strand,
A petty fortress and a dubious hand.
He left a name at which the world grows pale
To point a moral, or adorn a tale."

## LECTURE II.

*Delivered on Nov. 11th.*

In his second lecture Dr. Mercier proceeded to consider those powers of the signs and planets especially appertaining to medicine.

### THE DOMINATIONS OF THE PLANETS.

The planets successively influenced the fœtus during pregnancy. Saturn in the first month dried it up, causing early abortions. Jupiter in the second month bestowed the spiritus naturalis. Mars, in the third, supplied bones and differentiated organs. Sol, in the fourth, supplied blood and perfected heart and liver. Venus, in the fifth, gave ears, eyebrows, and pudenda. Mercury, in the sixth, opened the nose and mouth. Luna, in the seventh, developed the lungs and divided fingers and toes.

After birth the most important dominations of the planets were as follows. Saturn regulated the black bile and presided over bones, teeth, cartilages, the right ear, spleen, bladder, and memory; also over their affections, and in addition over quartan fever, scabies, lepra, tabes, melancholia, paralysis, icterus niger, dropsy, cancer, cough, asthma, phthisis, and hernia; over violent death by falls, shipwreck, suffocation, and by the public executioner. Jupiter governed the blood, liver, diaphragm, muscles of trunk, touch and smell, judgment and *appetitus concupiscibilis*, and their affections, as well as small-pox, angina, inflammation, pleurisies, peripneumonias; and presided over death in war and duels. Mars governed the yellow bile, gall-bladder, pudenda, kidneys, the *appetitus irascibilis*. His diseases were acute fevers, plague, yellow jaundice, convulsions, hæmorrhages, carbuncles, erysipelas, ulcers, and phagedæna. He ruled death by steel, fire, projectiles, bites and stings, "the slaughters and blood-letting of ignorant surgeons." Sol regulated the heart, arteries, right side in men and left in women, the vital spirits, and the bilious blood. His diseases were ephemeral fevers, syncope, spasm, catarrhs, and diseases of the eyes; he ruled death by plague, syncope, and in battle. Venus presided over the pituitous blood and semen, the throat, breasts, abdomen, uterus, and genitalia; over taste and smell, touch and pleasurable sensations, and the *appetitus concupiscibilis*. Her diseases were lues, gonorrhœa, priapism, barrenness, lientery, and abscess. She governed death from poison and sexual excess. Mercury had jurisdiction over animal spirits, legs and feet, hands and fingers, tongue, nerves, and ligaments; over taste and hearing, common sense, imagination, and reason. His diseases were relapsing fevers, mania, phrenitis, delirium, fatuity, insanity, epilepsy, convulsions, and cough with profuse expectoration. He influenced deaths by poison, witchcraft, and certain processes of law. Luna presided over the phlegm, brain, the right side in women, the left in men, the stomach and membranes, fear. Her diseases were quotidian fevers, epilepsy, apoplexy, vomiting, fluxes, dropsy, cold abscesses. She caused death from superpurgation and drowning.

The several jurisdictions of Mercury and Luna showed that those we call lunatics should rather be called "mercurials," for lunacy in the strict sense was fatuity with lucid intervals. Until the passing of the Lunacy Acts the legal meaning of lunatic was a demented person who had lucid intervals, and though in common parlance it was applied to all insane persons, the more precise and conservative lawyer always used the term in its strict sense till the middle of the last century.

### THE COMPLICATED NATURE OF ASTROLOGICAL CALCULATIONS.

Dr. Mercier next described in detail the corporature, or bodily configuration, which, with its corresponding mental disposition, was ruled by the several planets. The expert astrologer, he said, could tell at a glance what sort of person he had to deal with. The descriptions of the bodily configurations were not very definite, and authorities urged carefulness in judging of the dominant planet by the bodily configuration, a part of the science in which many failed. When it was remembered that any sign of the zodiac might be in any of the houses, that any planet might be in any house and have any aspect (sextile, trine, &c.) to the ascendant and the other planets, that the planets might have their powers reinforced or attenuated in various degrees, and that different planets had power over different persons, the possible variations were seen to be infinite and the whole scheme far too complicated for practical application.

In practice the calculations of the physician were narrowed down by Arnaldus de Villanova, a physician of great repute in the thirteenth century, to the following factors: (1) The thing concerning which the inquiry was made; (2) the sign that was in the ascendant; (3) the lord of it (whether of the sign or the ascendant was not clear); (4) the sign that was in the house of the thing inquired about (in the case of sickness this might be either the first house, or house of life; the eighth, or house of death; or the sixth, or house of sickness); (5) the lord of it (again, whether of the sign or of the house was not clear); (6) its (?) relation to the ascendant; (7) its (?) relation to Luna. The ascendant and its lord signified the sick man; the middle of heaven (the tenth house) his physician; the sixth house and its lord the disease; the fourth house and its lord his physic. Evil influences in the ascendant, tenth house, eighth house (of death), or fourth house were unpropitious; good influences acting on the ascendant and its lord, and Luna in a mobile sign (Aries, Cancer, Libra, or Capricorn), meant a speedy end (good or bad as otherwise indicated) to the illness; the opposite indicated a long illness.

After discussing the good and evil influences Dr. Mercier pointed out that the position of the

moment of birth, not of Charles XII., but to that of Gustavus Adolphus. In working it out, however, he found that by no ingenuity or artifice could he make the predictions to be drawn from this scheme fit in with the known career of Gustavus Adolphus, whereas they suited with surprising accuracy and appropriateness that of Charles XII. So while he did not venture to take the liberty of altering the position of the heavenly bodies that astrologers were accustomed to take, he had merely altered the date by less than 100 years and substituted the name of one king of Sweden for another.

heavenly bodies in the houses altered from hour to hour, and a fatal disposition of them at one moment might change to a favourable one in a couple of hours, and *vice versâ*. Luna, who was now in the ascendant, and therefore smiled on the patient, would in 14 or 15 hours' time be in the eighth house, and condemn him to death. It was manifestly of the utmost importance, therefore, to fix upon the correct hour and minute for setting up the *tabula celestiarum*. It was to be feared, however, that in this matter astrological physicians allowed themselves a good deal of latitude. It was always advisable to compare the scheme of the decumbiture with that of the nativity of the patient. If the lord of the ascendant of the nativity was favourably placed and fortunately aspected in the decumbiture the patient would be strengthened and live, and *vice versâ*.

### How the System Originated.

Dr. Mercier expounded at some length the relation of astrological influences to the administration of medicines and to critical days, and discussed the obvious objections to these doctrines, and the replies to these objections made by ancient astrological physicians. He then said that to us, with our present knowledge and requirements of evidence, and our ways of thought, all this appeared such a farrago of tomfoolery that it was difficult to understand how it could have been seriously entertained by men of ordinary intelligence, and yet we knew that it was, in fact, believed by the rarest intellects of their time, some of them, like Roger Bacon and Albertus Magnus, the rarest intellects of all time. It was, therefore, interesting to carry our minds back with a view to finding how the system originated and how it was maintained. The first was explained by the overwhelming power of authority, the last by the geocentric belief that was overthrown by Copernicus.

Man being the centre and end of the cosmos, what was the use of the heavenly bodies? The sun's influence on life was obvious enough, whence it was concluded that if the sun had influence so must the other planets have, and if his power varied according to the sign he occupied, so also would that of the other planets. In a world in which natural law was unknown and everything seemed to happen by chance the mind clutched at anything that offered an explanation of how things happened, and here was one ready to hand. The moon was evidently complementary to the sun. Her power was greatest when she was in opposition, and at this time she antagonised the sun by producing a colourable imitation of daylight at night, thus interfering with his power of regulating light and darkness. Since opposition meant antagonism other differences also must indicate some difference in influence. As the sun was manifestly benevolent to the human race, the moon, which antagonised him, must be malevolent.

Whatever characters the sun and moon possessed must be shared also by other planets. To induce diseases the planets must influence those humours by whose defect or excess diseases were produced, and this was effected by the four qualities, heat and cold, moisture and dryness, which characterised these humours as they pervaded all things in Nature, including the planets themselves, in varying combinations. When we had got thus far the remaining doctrines of medical astrology followed naturally by development and elaboration.

### The Human Craving for Explanations.

We should take a very superficial view of astrology, however, if we failed to recognise that beneath all this strange doctrine, under all its monstrous assumptions, lay the insatiable craving of the human mind for explanations. Astrology had been discarded as a garment outgrown, but could we assure ourselves that we had outgrown and discarded the mental carapace that rendered such beliefs as astrology possible?

Did not logicians still teach doctrines every bit as absurd as the doctrines of astrology? Even in medicine itself, did we never take that for an explanation that was no explanation? Ataxia was explained by calling it a loss of coördinating movements; a delusion by discovering a lesion in the brain; feeble-mindedness by hereditary influence; hysteria in middle age by some sexual irregularity in youth; a hypothetical increase of appendicitis by a hypothetical increase in the consumption of meat!

Surely we had every right to despise those who attributed all acute diseases to the influence of the moon and all chronic ones to that of the sun, and the "Black Death" to the conjunction of Mars, Jupiter, and Saturn in Aquarius, for we now knew with assured knowledge that all acute diseases were produced by intestinal stasis, and all chronic diseases were due to that blessed combination of words—alimentary toxæmia.

## THE LEPROSY PROBLEM IN THE BRITISH EMPIRE.[1]

By H. BAYON, M.D. Genoa,
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On considering leprosy from a nosological point of view one is struck by its long incubation, its slow and chronic course, and the terrible mutilations and disfigurement it is capable of producing without appreciably shortening the life of its victims. Its general infectivity, or, more correctly, contagiousness, appears to vary somewhat in different climates, because though nowadays it is practically confined in great numbers to tropical and subtropical countries, still it can claim to be a universal disease occurring from north to south all over the inhabited hemisphere. In other words, it appears to have spread or persisted under some conditions, and died out under others, because we know that it was extremely prevalent in Europe in the Middle Ages.

### *The Contagiousness of Leprosy.*

It is not possible, from a scientific point of view, to deny that leprosy is contagious, even though we may not quite exactly know in which way the disease is transmitted from one individual to another. Our knowledge of this fact is founded on the following substantiated observations.

1. That it is a disease due to a definite micro-organism.
2. That in Northern Germany, where the disease had been reintroduced from Russia in modern times, the infection was found to have concentrically spread from the first imported cases.
3. That the overwhelming majority of cases originate in countries where leprosy is relatively common.
4. That in the rare cases where the disease has been contracted in countries where leprosy is not indigenous, such

[1] The substance of a lecture delivered before the Royal Society of Medicine on Nov. 20th, 1913.

as England, Holland and Southern Germany, in every case we are able to prove the more or less intimate contact with lepers who in their turn came from abroad after a more or less prolonged stay in a leprosy-ridden country.

5. That in countries where leprosy is relatively rare the disease is found to be bound to definite foci or families. This has been observed in the Alpes Maritimes, on the Riviera, and in the Valais.

6. That the countries which have carried through universal segregation have been rewarded by a gradual and constant diminution of the disease.

7. That where segregation has been abandoned or loosely carried out the scourge has attacked an ever-increasing number of individuals.

The grounds on which the contagiousness is denied are the following, I believe:—

1. That medical men and attendants never contract the disease in leper asylums.

2. Because the disease cannot be transmitted to animals, and inoculation experiments on human beings have failed.

The first statement is not quite correct.

Infection under these circumstances is not frequent, but still several cases can be brought forward showing that attendants and medical men do contract the disease. In this country the infection of Sir George Turner has become public, but missionaries, nurses, attendants, and medical men are still living in England and elsewhere who have contracted the disease under similar circumstances, but whose cases are only known to those taking a definite interest in the disease. It should not be forgotten that on somewhat similar grounds the infectivity of tuberculosis has been denied, the deduction being based on statistics showing the low ratio of marital infection.

Nor is the second statement quite correct.

The first part of this argument would have allowed us 15 years ago to deny the contagiousness of syphilis. As a matter of fact, leprosy appears certainly to be transmissible to laboratory animals such as the rabbit or rat, the lesions in the first instance being very often strictly localised, and failing to develop at all in a very great proportion of experiments.

The whole question is, however, still under discussion, but I am demonstrating sections under the microscope, from which you may be able to form your own opinion.

As to the inoculations which Danielsson, Profeta, Cagnina, and Bargilli carried out on themselves and others, the results, it is true, were negative, but in view of the knowledge acquired of the bionomics of the leprosy micro-organism they have only proved that experimental inoculation with small quantities of leprous material is incapable of producing the disease in the human being in every case.

In Arning's well-known case of the convict Keanu, who was pardoned on condition that he allowed himself to be inoculated with leprosy, the disease did develop, but the case is somewhat spoilt by the fact that the man had lepers among his relatives, and was in contact with them before and after the inoculation.

Unfortunately, leprosy is a disease with too far-reaching consequences to make its inoculation morally justifiable, even on willing subjects. Therefore, we must await the results of further animal experiments, which should confirm previous successful results.

Another argument often brought forward by non-contagionists is that leprosy disappeared in the Middle Ages from England, France, Germany, &c., without strict measures of segregation having been resorted to. It appears to me that the measures adopted to prevent the spread of the disease were extremely severe. Lepers were not allowed into churches or market places, had to carry a distinctive dress, and had to make their presence known by a bell or clapper—in a few words, the intimate contact between the healthy and the diseased which gives rise to the most favourable conditions for transmission was most radically avoided. I also believe that plague directly and indirectly swept away a great proportion of the leper population, as they were feeble, and during times of epidemics and commotion would receive no alms. This observation has been confirmed to a certain extent in India in modern times.

Figures bearing on the contagiousness of leprosy are available from Norway and Japan, and both seem to point the same moral. Kitasato's statistics from Japan show that children of lepers become leprous in a proportion of only 7·05 per cent. of the total. Matrimonial infection was proven in 3·8 per cent. of cases, whilst persons living under the same roof showed a proportion of only 2·7 per cent. Brothers and sisters infect each other in a ratio of 4·2 per cent. These figures may need correcting according to the latest statistical methods, but they roughly correspond to the experience gained in Norway, where Sand and Lies's figures differ somewhat, but show that the children of a leprous mother are more frequently infected than those whose father alone is diseased. showing that the more intimate contact between mother and child leads to a greater percentage of acquisition of the scourge. Sand's statistics from Norway show that in 357 married couples in which the father alone was a leper, 1241 children were born of whom 63, equal to a proportion 4·9 per cent., became lepers. In 138 other married couples observed the mother only was a leper; of 533 children born of these unions, 56, or 10·5 per cent., developed leprosy. In 17 couples both parents were diseased; of the resulting 63 children, 8, or 12·7 per cent., got infected. Lies's figures from South-Western Norway give somewhat similar results. 230 married couples in which the father only was a leper had 769 children, of which 79, or 10·2 per cent., contracted the disease. In 223 married couples the mother only was leprous; of 648 children of these, 106, otherwise 16·36 per cent., became lepers. In 28 instances both parents were lepers; out of 79 children, 29 fell victims to leprosy—that is, 39·19 per cent.

All these figures show, however, that leprosy is but relatively slightly contagious, though under certain circumstances the disease has been known to have been acquired with great ease after a very short stay (a day or two) in leprosy-ridden areas, though it may have developed or been noticed as late as 20 or more years after contagion. This being so, it is absolutely useless to try to deduct anything from a small series of experiments, or experiments where observation has not been sufficiently prolonged. The same applies to the bacteriology of the disease; a few attempts at cultivation are bound to be futile, even hundreds of tubes, and dozens of attempts may result in perfectly negative results.

The question of the transmission of leprosy remains to be mentioned. The statistics I have quoted seem to show so clearly that contagion or infection through immediate contact is the usual mode of transmission, that it appears rather far-fetched to seek an insect carrier of the scourge. As a matter

of fact, all experiments to prove this mode of dissemination have so far failed, though it appears quite probable that the common house-fly can suck up the germs of the disease from open sores and carry them about for several days. The horrid sight of flies swarming and hovering round purulent sores and round the nostrils of leprous beggars is well known to the traveller in Eastern countries.

The heredity of leprosy has also been refuted in the course of time for the following reason—that the children of leprous parents if taken away at an early age only develop the disease in very rare instances. Of course, it cannot be absolutely denied that in a minimum proportion of cases the lepra bacterium may pass the placenta and infect the fœtus, but cases of congenital leprosy appear to be unknown, though in several instances children have shown definite symptoms of the complaint before the age of five.

The modern medical eye looks, therefore, upon leprosy as a disease which is definitely contagious, but to a very slight degree under proper sanitary conditions. In situations where hygienic precautions are defective and the contact between the diseased and the healthy is unnecessarily immediate, where a leper is obliged to sleep in the same bed with other members of the family, and personal cleanliness apt to be in abeyance, the danger of contagion is certainly present in a varying extent.

We know that at the present moment about 25 to 50 lepers or more are living in England, and yet of these only one has acquired the disease in the United Kingdom. The simple precautions which these unfortunate people are able to take to keep themselve separated from their families have been sufficient to prevent contagion. In India, on the other hand, the last Census appears to show an increase of lepers from 100,000 to 110,000 in ten years. In Basutoland the principal medical officer counted 300 lepers 25 years ago; the Government was asked in an official report to enforce segregation, otherwise an increase to double that number was to be expected within 20 years. For financial and other reasons this advice was not acted upon. Last year a census shows 800–900 lepers in Basutoland, so that the principal medical officer does not appear to have gone far wrong in his prophetical estimate.

### *The Treatment of Leprosy.*

Nearly every imaginable drug has been tried, and a great number are still under experiment with the intention of discovering a cure for leprosy, but we have yet to find a specific and sure method of treatment. The present position can, however, be summed up in the words that even the most useful therapeutic agent requires the help of an early diagnosis of the disease and proper hygienic conditions, but that at no time the therapeutic outlook has been so hopeful as at the present moment. In its initial stages leprosy affects the general well-being and appearance of an individual to such a slight extent that any therapeutic effort which succeeded in arresting the disease in its early stages in a fair proportion of cases would practically amount to a cure. Spontaneous remissions of the disease and spontaneous apparent "cures" take place, however, in a small proportion of lepers, and can last for several years, in some instances as long as 15 years or more, after which the disease may again become virulent and rapidly carry its victim to the grave. Therefore any drug or method of treatment must stand the test of time—five years or more—and have been carried out on a sufficient number of patients. Without taking into consideration these important initial factors it is absolutely irresponsible to speak of cure in a chronic, slow, intractable plague such as leprosy is known to be.

A review of all therapeutic attempts, many of which are eminently sketchy and saltatory, would fill a volume by itself. I may, however, be allowed to give the results of the experience made at Robben Island, and in South Africa generally. For all advanced nodular stages chaulmoogra oil, or better still its refined constituent, "anti-leprol," injected intramuscularly 3 to 5 c.c. at a time, is still the best palliative I know of. The injections should be repeated every three days, and the course should last for five months or more if the patient can stand it, because at times the injections may become very painful. Chaulmoogra oil and anti-leprol can also be given internally in small capsules. Anti-leprol is decidedly preferable for the latter mode of treatment, as it does not cause the gastric disturbances which are the outstanding feature of the unrefined oil. Doses varying between 15 m. and ten times that quantity can be taken daily.

Early macular cases appear to respond better to other forms of treatment. A cultural extract has been prepared from Kedrowsky's isolation of the micro-organism of leprosy on similar lines to Koch's Alt-tuberkulin. It contains, accordingly, the water-soluble toxic constituents of the bacillus, which, however, in the case of Hansen's germ, are very feeble indeed, so that much higher concentrations have to be injected than is the case in the analogous treatment of tuberculosis by tuberculin. Dr. J. M. H. MacLeod, of Charing Cross Hospital, and Dr. Sydney Davies, resident medical officer of the Pretoria Asylum, have made use of this substance on single chosen cases. The results in both instances have been very satisfactory. Dr. MacLeod's case has now been under treatment over a year, and has improved to such an extent that the disease is no more diagnosable. I am authorised to say that other therapeutic efforts failed to bring about any change for the better, and that the patient has now been observed for over a year and a half without any remission taking place. On the contrary, a further subjective improvement has so far taken place that muscular pains which were present in the arm affected have disappeared. Dr. Davies's patient, a girl aged 8½ years, was covered with dusky red patches all over her body. These faded away in the course of treatment extended over three months, and have not reappeared during a period extending over ten months. Similar results were obtained at Robben Island.

I should like to clearly state, however, that this method of treatment does not appear to be of real advantage in advanced nodular cases. The injection of one or two cubic centimetres of the cultural extract causes a rise in temperature which is accompanied by the appearance of bacilli in the blood. This may possibly lead to dissemination of the germs of the disease. If the individual affected is young and otherwise healthy, and the leprotic symptoms not marked, a course of injections beginning with one cubic centimetre hypodermically every three days may be distinctly beneficial. The treatment should be continued for some time even after the maculæ have disappeared.

The surgical treatment of leprosy requires most careful and constant attention. Fingers, toes, hands, and feet are constantly getting septic, and

prompt surgical intervention can really work marvels. Eye complaints, which are exceedingly frequent among lepers, are amenable to a certain extent to operative procedures, but relapses often follow even after the most skilful intervention.

*On Preventive Measures in Leprosy.*

Having shown that leprosy is but slightly contagious if proper sanitary precautions are taken, and that any form of treatment which can be applied with any hopes of success must be made use of in the very early stages of the disease, it may appear inconsequent to follow up with the statement that only a universal system of segregation can hope successfully and promptly to cope with the spread of the disease. The Americans in the Philippines succeeded, by an energetic and consequent segregation of all cases, in reducing the new admissions by 90 per cent. In South Africa, where in some colonies, out of financial considerations, only about half of the leper population is segregated, the rate of admission has remained constant for the last ten years. And yet the Leprosy Repression Act in Cape Colony was extremely severe—in virtue of its very severity it could not be carried out in its entirety. Opponents of segregation consider that it is a cruelty to separate the lepers from their friends and family. Two facts, however, are overlooked: one is that when an individual develops leprosy in a severe form his friends soon abandon him, and that consideration of the feelings of one may mean the misery of many, because one single leper may give rise to several. In a case observed in Northern Germany one girl directly and indirectly infected 28 people.

It is only in properly constructed and conducted asylums that lepers can be satisfactorily taken care of and prevented from infecting their surroundings. If in the course of time early cases, and a certain proportion of the more advanced, can be favourably influenced by treatment, or even if the present results withstand the test of time, there will be ample reason for trying to get rid of the scourge by universal registration and segregation, which also entails proper treatment and care. I quite admit that tuberculosis and syphilis present two problems which are equally if not more pressing. But we are not aware that consumption can be stemmed by segregation, and syphilis requires quite other measures.

Leprosy is far reaching in its social results, and the individual affected is cut off to such an extent from his fellow beings as renders his earning of a livelihood a matter so precarious that it is the duty of every Government to prevent its further spread from the standpoint of humanity and also that of sound policy.

It does not seem to have been sufficiently understood that all measures of preventive medicine which are based on sound scientific principles are excellent business propositions. I believe that the money invested in the study of Mediterranean fever, now that the cause has been found, is saving the Government yearly a sum which would be sufficient to pay a dividend of about 100 per cent. or more. Such examples could easily be multiplied; one which lately came under my notice in Russia deserves mention here. Relapsing fever in Moscow alone attacked about 1500 to 3000 individuals each winter. Each patient remained in hospital about three to five weeks. Since the invention of salvarsan, which is a wonderful specific for similar diseases of the blood, the stay has been shortened to five days or a week. The resulting saving is about 30,000 to 50,000 roubles a year.

The sanitation of Khartoum, which owes so much to the work of the late Director of the Wellcome laboratories at the Gordon College, has also made itself pay over and over again in hard cash by the resulting influx of visitors and saving in hospital expenses for inhabitants and officials.

How are these comforting examples applicable to the problem of leprosy in the British Empire? By a systematic and persevering attempt to get rid of the disease by instituting settlements for the voluntary segregation of the worst cases, where the numbers are too great to be dealt with at one time, as is the case in India; by a system of universal segregation in properly conducted asylums in those colonies and dependencies where relatively small numbers only are to be accounted for. Unfortunately, in some countries the principle "out of sight out of mind" is still applied to the leper asylums; any money spent on such principles is nearly wasted. It should, however, be clearly understood that every system of segregation needs the coöperation of the lepers themselves, and this can only be obtained by paying the asylum staffs proportionately and adequately and securing proper medical attendance. The experience of other countries shows us that such a course would lead to a gradual extinction of leprosy, a disease which has now been known for such a long time that its survival should no longer be tolerated.

## TUBERCULOSIS OF THE EYE.*

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NOT so very long ago tuberculosis was regarded as a rare cause of diseases of the eye. The text-books current in my student days had little to say upon the subject. The etiological importance of tubercle was then altogether overshadowed by that of syphilis.

Villemin's classic discovery that tubercle could be inoculated into rabbits (1865) was in 1867 applied by Langhans to the conjunctiva of those animals. The first definite case of tubercle of the human conjunctiva was brought forward by Koester in 1873, and was speedily followed by communications by Sattler, Walb, and others. In 1882 Pfeiffer published a paper on the bacillus tuberculosis as found in lupus of the conjunctiva. But so infrequent was the condition thought that, writing in the year 1885, P. H. Mules estimated the incidence of the disease at 1 in 33,000 eye patients. With this it is instructive to contrast the more modern estimates of 1 in 2700 (Eyre), 1 in 1660 (Saemisch), or 1 in 1000 (Stephenson).

For a knowledge of the fact that the lacrymal sac may be affected by tubercle we are indebted to the Zürich School of Ophthalmology, as represented by Haab (1879) and Amiet (1887). Pioneers were Wagenmann (1888), Leidholdt (1889), Fick (1890), and Bock (1891). In 1894 Jaulin devoted his Paris thesis to the subject. Among 52 lacrymal sacs excised in Wagenmann's clinic, Grobe and Hertel found tuberculous changes in 7 per cent., while Rollet found the same lesions in 8 per cent. of 46

* Remarks preliminary to a demonstration of cases of tuberculous disease of the eye given at the Medical Graduates' College and Polyclinic, London, on Oct. 24th, 1913.

extirpations. In May, 1910, an important discussion (opened by E. Rollet) on tuberculosis of the lacrymal passages took place at the French Ophthalmological Society.

Interstitial keratitis was described by the famous William Mackenzie in 1830 as "scrofulous corneitis," but in 1863 Sir Jonathan Hutchinson showed that the affection was almost always a direct result of inherited syphilis. The influence of acquired syphilis in that direction was not then recognised by Hutchinson. To some extent professional opinion has now veered round to Mackenzie's view. It is known that some of the cases, particularly the unilateral and less typical ones, are due to tubercle. For example, in my own series of 101 cases of interstitial keratitis[1] tuberculosis was identified as the cause in 9·90 per cent. In short, the modern biological tests for tuberculosis have supported the view, originally based on clinical observation, that tubercle is a cause of primary keratitis.

Conditions that we should now regard as tuberculosis of the iris were described by Lawrence in 1833 and by Mackenzie in 1854. Such cases were examined with the microscope by Richetti in 1869 and by Berthold a couple of years later. In 1890 Julius von Michel[2] stoutly maintained that inflammation of the iris due to tubercle was nearly as common as that due to syphilis. Iritis might result from tuberculous infection, and yet might not be accompanied by tubercles. Michel held that a tuberculous inflammation of the iris might be the first visible expression of tubercle in some other part of the body.

The foregoing views received support from the experimental work of W. Stock,[3] who by the injection of pure cultures of tubercle bacilli into the auricular vein of rabbits was able to produce inflammation of the iris and ciliary body (anterior uvea), to say nothing of other structures of the eye, such as the cornea, the sclera, the choroid, the conjunctiva, and the tarsus. The naked-eye characters of these experimental inflammations in many instances did not conform with those generally regarded as characteristic of tubercle, neither did their histological structure, despite the all-important fact that tubercle bacilli could be found in them.

That tubercles might form in the choroid has been known since G. de Mussy found them after death in 1837, Jaeger recognised them during life with the ophthalmoscope in 1855, and Manz examined them with the microscope in 1858. In 1896[4] I described a chronic form of choroidal tubercle, of which I had seen examples in the fundi of "strumous" children, and I adduced reasons for believing that such lesions might become absorbed, leaving behind them more or less characteristic changes in the fundus oculi. Some few years afterwards the late George Carpenter and myself[5] again described these deposits as instances of "obsolescent tubercle," and in reference to acute miliary tubercle of the choroid, estimated that those changes were found in at least 50 per cent. of cases of tuberculous meningitis. Various choroidal lesions believed to be of a tuberculous nature were found in 11 of 119 patients suffering from such various forms of surgical tuberculosis as adenitis, enlarged joints, spinal caries, and chronic tuberculous cerebral tumour. Recently, Wilbur B. Marple,[6] working at the Babies' Hospital, New York, found miliary tubercle of the choroid in 13 consecutive cases of tuberculous meningitis (100 per cent.). The examinations were made at very frequent intervals, the electric ophthalmoscope being used for the purpose.

Material support to the present writer's views on the subject of "obsolescent tubercle" has been given by T. Harrison Butler,[7] who saw eight such cases among 5000 eye patients. In some of his cases the tuberculous nature of the cases was demonstrated by the employment of tuberculin. Carl Koller,[8] of New York, too, has reported two of these cases, which presented so definite a clinical picture that Koller claimed it as "one of the ophthalmoscopically recognisable forms of choroiditis." In one of his cases, after the injection of tuberculin, Koller obtained reaction in the affected eye, as shown by opacities of the vitreous and change in the colour of the choroiditic lesions.

Despite the dictum of Calderaro,[9] that tubercle of the sclera is primitive, and that even when associated with other tuberculous manifestations, probably arises from exogenous infection, it is likely that the condition in question is nearly always secondary to tubercle of the anterior uvea. The dense fibrous tissue of the sclera would naturally be inimical to the implantation and the development of the virus. Inspection of a section of tuberculosis of the uvea sometimes gives the clue to the origin of tuberculous scleritis. It shows collections of lymphoid and endothelioid cells lodged in the close neighbourhood of vessels in the thickness of the sclera, but separated by sound tissue from the ciliary body, on the one hand, and the surface of the sclera, on the other, although at the same time a nodule of typically tuberculous tissue may be found in the latter position. The transference in this case has been by metastasis. There is another and perhaps commoner mode of origin from the anterior uvea—namely, by direct spread. As surmised by Hancock and Mayou,[10] many cases of tuberculous scleritis doubtless masquerade as instances of episcleritis.

From what has been said it will be evident that the tubercle bacillus is becoming more and more widely recognised as a cause of diseases of the eye. It is now known that every part of the eye and its appendages, with the single exception of the crystalline lens, may be invaded. By almost universal consent, the B. tuberculosis is now ranked next in importance only to the spirochæta pallida as an etiological factor in maladies of the eye. Apart from such paratuberculous conditions as phlyctenulosis I must not be understood as claiming that tuberculous affections of the eye are common. That would be far from accurate. But we know that tubercle affects structures of the eye once believed to be exempt, while some tuberculous maladies, formerly believed to be very rare, are now known to be comparatively frequent. In other words, tubercle of the eye is relatively but not absolutely common. It need hardly be said that a tuberculous condition of the eye implies the existence of tubercle bacilli, human or bovine, and that these may gain entrance to the eye either by exogenous or endogenous infection.

Such conditions as tubercle of the conjunctiva or of the lacrymal sac appear to be nearly always due to exogenous infection. To the conjunctiva the bacillus gains entrance by a scratch, an abrasion, a broken-down phlyctenule, a penetrating wound (accidental or surgical), or even, as suggested by John W. H. Eyre,[11] between the interstices of the epithelial cells of an apparently normal conjunctiva. On the other hand, tuberculosis of the inner parts of the eye, as the iris, ciliary body, or choroid, are

nearly as invariably the outcome of endogenous infection carried by the blood stream from a focus of tubercle in some other part of the body to the eye.

While such is, broadly speaking, the etiology of the conditions named, exceptions of course occur. On two occasions W. Stock,[8] whose work has already been alluded to in this communication, succeeded in producing tubercle of the conjunctiva by injecting cultures of tubercle bacilli into the venous system of the rabbit. This will prepare us for the statement that on occasion tubercle of the conjunctiva may be due not to exogenous infection, as is the rule, but to endogenous infection. This happened in a case reported by myself[12] some years ago, where a female child, aged 17 months, suffered from tubercle of the conjunctiva as part of a generalised tuberculosis, with pulmonary, meningeal, and choroidal manifestations. The case was fatal. In a somewhat similar sort of way tuberculosis of the iris has been known to follow a wound (E. Fuchs, L. Dor).

The distinction between the two kinds of infection, exogenous and endogenous, is not without practical importance. For example, an exogenous lesion, such as a tuberculous lacrymal sac, may be completely removed, and all chance of generalisation be thereby abrogated. On the other hand, it would be of little use removing an eye with tubercle of the iris or choroid with a view to prevent generalisation, since the condition practically always originates from a tuberculous lesion elsewhere. Yet it is not so many years ago that a deservedly popular text-book on diseases of the eye recommended that way of dealing with tuberculous iritis. It is quite a different thing when removal of such an eye is rendered necessary by the local conditions, especially by pain, although Rogman[13] and others have drawn attention to the danger attendant upon enucleation in tuberculosis of the eyeball.

Some tuberculous maladies of the eye are so characteristic that they may be recognised as such almost literally at a glance, but there are many more that cannot be diagnosed in that simple way. In dealing with an accessible lesion—for example, a diseased lacrymal sac—we first try to find the specific micro-organism in the pus after the latter has been mixed with antiformin, or that failing, we seek for it in excised granulations. A simple method I have sometimes employed with success is to wash a bit of excised tissue free from blood in several changes of sterile water, and then, after cutting it open with knife or scissors, to smear several cover-glasses with the raw surface. The prepared glasses are stained in the ordinary way with carbol-fuchsin. This method of diagnosis may be applied also to a conjunctival granulation or to a diseased nodule excised from the sclera. Only in case of failure does it become necessary to resort to emulsification, the centrifuge, and other methods, into which it is not my intention to enter now. If Koch's bacillus be found under the circumstances we may safely conclude that the condition is of tuberculous nature.

In some circumstances we turn to the histological diagnosis, particularly when the conjunctiva is affected. A morsel of affected tissue is excised with scissors, hardened in formol, and cut in paraffin. The sections are then stained for structure (hæmatoxylin-eosin) and for acid-fast bacilli (Ziehl-Neelsen method). Such specimens from the conjunctiva frequently show the most beautiful pictures of tuberculosis, including giant cells of the Langhans type and areas of caseation. Indeed, complete tubercle-systems are common. It is unfortunate that the histological diagnosis is apt to fail us in what is clinically the most common form of conjunctival tuberculosis—namely, that characterised by hypertrophic granulations, the so-called "cockscomb excrescence." Sections from such cases usually show little more than so many lymphocytes, together with small blood-vessels embedded in scanty connective tissue. Moreover, in cases which represent extension of lupus from the skin to the conjunctiva the histological investigation seldom yields conclusive results. In these two forms of conjunctival tuberculosis, as pointed out by John W. H. Eyre,[11] the tubercle bacillus is difficult to find. It was formerly thought that Müller's fluid, then employed almost to the exclusion of other fixatives in eye specimens, was responsible for the difficulty. But the fact that Haab[14] succeeded in demonstrating the bacilli in specimens that had lain in Müller's fluid for several years speaks against the view. It is much more likely that the organisms are hard to find simply because they are present in extremely small numbers, a respect in which we are reminded of lupus vulgaris.

Prominence has recently been given to the work of G. Liebermeister,[15] who holds that atypical anatomical lesions may result from the action of the tubercle bacillus. He found that guinea-pigs inoculated with such atypical products became infected with tuberculosis. In other words, Koch's bacillus need not of necessity produce a histological tubercle, although that is its most characteristic product. W. Stock[8] found that the ocular lesions experimentally brought about by injection of tubercle bacilli into the blood of rabbits often failed to show a typically tuberculous structure, although the B. tuberculosis could be demonstrated in them. In my own experience, this is sometimes seen in sections from human tuberculous uveitis, where the sole histological evidence of tubercle is furnished by scattered nodules of lymphocytes, and yet on other grounds, notably the finding the tubercle bacillus, it cannot be doubted that the lesion is tuberculous. In the choroid, on the contrary, the lesion is generally of the most distinctive type. The tubercle, whether submiliary, miliary, or massed, is a typical histological tubercle. The anatomical changes in tuberculous lacrymal sacs, again, are often of a highly characteristic nature. In reference to this point Bribak[16] insists that the whole sac should be cut in series, since otherwise a small tuberculous deposit may be readily overlooked. Fibrosis, which involves much thickening of the wall, is regarded by Collins and Mayou[17] as characteristic of the condition. Sections of tuberculous scleritis, while they seldom include many tubercle bacilli, usually show typical giant cell systems, together with caseation. In this country we are precluded from a resort to the most certain of all tests—viz., the inoculation of suspect material into an animal susceptible of tuberculosis, such as the guinea-pig.

When dealing with an affection of the deeper parts of the eyeball suspected to be of tuberculous nature a method of diagnosis adopted by myself and some others may be employed. It consists in drawing off the aqueous humour and in examining it directly for tubercle bacilli, or in trying to cultivate those organisms from it, or in inoculating it into the eyes of experimental animals. Gourfein[18] was the first to employ this method. Soon after the publication of his first communication I

succeeded in growing the tubercle bacillus on glycerine-agar inoculated with aqueous humour from a case of tuberculous uveitis. Another of my experiences was communicated to the Ophthalmological Society in October, 1907.[19] The facts follow. A female, aged 35 years, suffered from iridocyclitis of one eye. When the keratitic deposits had cleared enough to allow the fundus to be seen, what appeared to be a tubercle of the choroid was found near the optic disc. The anterior chamber was tapped, and careful examination of cover-slips smeared with the fluid led to the discovery of a few acid-fast bacilli. The patient (seen only the other day) is now in good general health, although she reacts strongly to von Pirquet's surface vaccination. The choroid shows an obsolescent tubercle. In yet another instance of chronic iridocyclitis,[20] where the clinical evidence of tubercle was slender and included only a slight rise in temperature towards night, increased pulse-rate, and one enlarged gland at the angle of the jaw on the left side, a restricted number of tubercle bacilli was found in the aqueous humour obtained after the affected eye had been enucleated. The presence of tubercle, however, had been attested in this patient, a girl aged 12 years, by the general reaction that on two occasions followed the subcutaneous injection of 1/1000 mgr. of tuberculin T.R., as well as by the focal reaction that was produced by applying Calmette tuberculin to the sound eye.

Lastly, we have at disposal other means for the recognition of deep-seated tuberculosis of the eyeball, as of other parts of the body. Leaving aside the biochemical examination of the blood serum with a view to the detection of specific antibodies, hypersensibility towards the toxins of tubercle may be demonstrated in several ways, of which two alone need be glanced at in this place—viz., (1) von Pirquet's skin reaction; and (2) Koch's subcutaneous test.

1. Von Pirquet's skin reaction, as well known, merely consists in making three small vaccination marks upon the forearm (or elsewhere), and allowing a drop of 25 per cent. old tuberculin to act upon two of the scarifications, the third being left as a control. Hyperæmia of the marks treated with tuberculin within 24 hours of the little operation testifies to a positive reaction. At this stage the resemblance to a mosquito bite is often very close. The advantages of the von Pirquet method are that it is easily performed, is free from danger, and may be used in out-patients. On the other hand, the test is so sensitive and tubercle (past or present) is so common† that, except in young children, the reaction is not of much diagnostic use. Singularly enough, a negative reaction is of greater value than a positive. An eye disease suspected to be of tuberculous origin is certainly due to something else if the patient fails to react to the careful use of tuberculin. A drawback of the von Pirquet method from the present standpoint is that from it we obtain no reaction as regards the eye lesion, so that we are cut off from a valuable means of diagnosis. In other words, the plan can merely certify us that a tuberculous lesion (active or latent) is present in some part of the body, without indicating its locality.

2. These disadvantages do not apply to the Koch subcutaneous method, which in return has some peculiar to itself. The "general reaction," as everybody knows, is shown by a rise in temperature some few hours after the injection of old tuberculin into the subcutaneous tissue, reaching a maximum in about 12 hours, and then falling slowly to normal. The outstanding advantage of the method is that some appreciable change, as increased redness, is observed in perhaps one-half the cases in the affected eye, and this "focal reaction," as it is called, stamps the lesion in question as tuberculous. Upon one form of focal reaction great stress has been laid by W. Stock[3] as a sign positive of tuberculosis. This consists in tiny grey deposits or thickening of the iris in the minor circle of that membrane. Something of a similar kind has been described by G. Tobias[21] in the shape of fine greyish spots situated at different levels in the substance of the cornea. These, like the changes signalised by Stock, are scarcely likely to be identified without the help afforded by the binocular magnifying glass.

The great advantage of the Koch method may be more than counterbalanced by the fact that on occasion the focal reaction produced by the tuberculin may exceed the limits either desired or expected of it. For example, rapid extension of ulceration or grave diminution of vision has been known to follow the operation. The former accident was mentioned by John W. H. Eyre,[11] while the latter has been described by W. E. Gamble.[22] In Gamble's patients the injection of old tuberculin was followed by a reduction of sight from 20/40 to 20/100 in the one case, and from normal to less than 1/10 in the other. The failure of sight, which occurred simultaneously with the general reaction, began some 17 hours after the injection, and lasted for three days or longer. In a case of tubercle of the fundus reported by Kraus and Brückner[23] focal reaction following the injection of tuberculin manifested itself under the guise of an increased number of hæmorrhages and œdema of the retina. Edgar Chatterton[24] observed an intraocular hæmorrhage in a child with iridocyclitis in course of treatment by tuberculin, but was not altogether satisfied that the two were connected as cause and consequence. T. Harrison Butler[25] has on several occasions seen the injection of tuberculin do harm. In one case of tuberculosis of the iris in a patient with a hectic temperature Butler gave 1/10,000 mgr. of T.R. after the temperature had been brought to normal by rest in bed. "The result," writes Butler, "was disastrous and hastened the inevitable loss of both eyes." He mentions two other cases where a condition of anaphylaxis had supervened, since in both tuberculin had been employed without mishap on former occasions. In the first, a severe example of scleritis of both eyes in an elderly woman, a relapse was treated with 1/5000 mgr. of T.R. As a result both eyes became violently inflamed and intractable iridocyclitis supervened. In the other case, of which no details are given, Butler states that the focal reaction caused considerable anxiety. The author as the result of his experience holds that a focal reaction obtained during a course of tuberculin treatment always does harm in eye cases, and on occasion great harm.

It would be impossible to conclude without paying a tribute to A. von Hippel,[26] who in 1904, at a time when tuberculin lay under a cloud, showed how it could be used successfully in cases of eye disease. He had employed it for ten years, and had come to regard it as a means of saving eyes that he

† Evidences of tuberculous infection were found by Hamburger in 77 per cent. of the necropsies made on children dying between the ages of 11 and 14 years, and by Naegeli in no less than 97 per cent. of the bodies of adults.

would once have considered beyond medical help. He employed graduated doses of tuberculin T.R., and in serious cases continued the remedy for six months at least. Injections, carefully controlled by the bodily temperature, were given every second day. Treatment was commenced with 1/500 mgr., and the dose was increased by 1/50 mgr. up to 1/5 mgr., and then by 1/10 mgr. to 1 mgr., an amount that was not exceeded.

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# THE EXAMINATION OF TUBERCULOUS PLEURAL FLUIDS.

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NUMEROUS observations have now been made on the pathology of tuberculous pleural fluids. In this article I propose to deal only with those tests which appear to be of chief interest and importance in diagnosis, and which, at the same time, can be carried out in the routine work of the laboratory without elaborate apparatus. Most of them can be made with the contents of an ordinary exploring syringe. For convenience in description, serous and purulent effusions will be considered separately.

## A. *Serous Fluids.*

1. *Physical examination.*—Tuberculous pleural fluids are usually transparent and of an amber tint. The formation of a more or less tough white clot on standing is common, and often causes the fluid to become solid. Quantitative tests are complicated and for routine work do not give sufficient help in diagnosis. The specific gravity of a puncture fluid is, however, of some use, and broadly distinguishes a transudate from an exudate. Tuberculous fluids being of the latter class give a higher specific gravity than do transudates. In tuberculous fluids I found an average of 1018. Where only small quantities of fluid are available an ordinary 1 c.c. vaccine ampoule cut off short at the neck and fitted with a minute glass stopper makes a rough-and-ready substitute for a specific gravity bottle. Various more or less complicated formulæ exist for working out the percentage of protein from the specific gravity.[1]

2. *Chemical examination.*—Tests for fibrin, protein, proteoses, serosamucin, urea, total solids, acetone, inorganic salts, &c., have all been employed in the diagnosis of exudates. I have tried most of these and find that quantitative estimations of (1) coagulable protein, (2) total solids, and (3) ash are of most value. The results obtained in 12 cases are given in the following table:—

| Protein per cent. | Total solids per cent. | Ash per cent. | Protein per cent. | Total solids per cent. | Ash per cent. |
|---|---|---|---|---|---|
| 6·7 | 8·2 | 0·8 | 5·0 | 8·0 | 0·1 |
| 4·0 | 5·75 | 1·0 | 4·7 | 8·0 | 0·5 |
| 5·0 | 6·25 | 0·75 | 2·5 | 4·0 | 0·5 |
| 5·8 | 7·5 | 0·75 | 5·0 | 7·1 | 0·71 |
| 6·75 | 7·7 | 0·5 | 4·5 | 7·0 | 0·5 |
| 5·5 | 7·5 | 0·9 | 5·25 | 7·0 | 0·5 |

The average of these results is: protein, 5·06 per cent.; total solids, 7 per cent.; ash, 0·63 per cent. The amount of coagulable protein is probably the best chemical test for tuberculous fluids, and in most cases is a fairly certain means of differentiating such fluids from transudates, which have a low protein content (usually less than 1·5 per cent.). I have not found it to be a satisfactory test in distinguishing tuberculous fluids from those secondary to malignant disease. It is best carried out by heating the fluid over a water bath, adding a few drops of dilute acetic acid, filtering, washing with boiling distilled water followed by alcohol and ether, and finally drying and weighing. Esbach's albuminometer is not sufficiently accurate. A full account of the more complicated physical and chemical tests will be found in Gruner's valuable work "Studies in Puncture Fluids."

3. *Cytological examination.*—Since Widal and others[2] pointed out the high percentage of small lymphocytes in tuberculous puncture fluids, the question has received much attention, and a detailed description is unnecessary. Films stained with one of Romanowsky stains appear to give the best results, especially if the cells be first washed with saline and sodium citrate solution. In a series of 25 cases of tuberculous effusion I only found one exception to this rule. This was a case of pneumothorax in which tubercle bacilli were present in a non-purulent effusion, but in which the cells were almost all polymorphonuclear cells, although no secondary infection was noted. The exceptions to the rule are probably few. They are: (1) during the first few days of an effusion; (2) in some cases of pneumothorax; (3) in secondary infections. On the other hand, a lymphocyte count may possibly, though rarely, occur in fluids which are not tuberculous (e.g., in transudates of mechanical origin). It is necessary to bear in mind also that various cells may simulate lymphocytes.

4. *Bacteriological examination.*—Microscopical examination of stained film preparations made in the ordinary way is seldom satisfactory, since the bacilli are so few in number. In cases where there is little or no clot, and especially if a large quantity of fluid be available, it is sometimes useful to allow the fluid to stand in a conical test glass for some hours and then centrifuge the deposit. If this method be used as a routine practice it is advisable to add a few cubic centimetres of sodium citrate solution in order to prevent the formation of clot. When a clot is present it is well to examine it carefully, since bacilli and cells are usually caught in its meshes. If it be thin and of delicate mesh it may be spread or teased out on a slide (after a little washing in distilled water), allowed to dry, and stained in the usual way. Sometimes, however, the clot is tough and does not break up or spread out readily. In this case it is well to use some

[1] O. C. Gruner: Studies in Puncture Fluids, 1908.

[2] E. A. Ross: Cytodiagnosis, Transactions of the Pathological Society, 1907.

digesting fluid. Either artificial gastric juice (Jousset's formula is most satisfactory[3]) or 20 per cent. antiformin has been employed by me. The former appears to digest more completely. A useful modification is to digest the clot *partially* with antiformin (a 20 per cent. solution for an hour at 37° C. will usually suffice), wash for a few seconds in water, and, finally, tease out on a slide. Various more elaborate methods of examination for tubercle bacilli have been suggested, such as passing the fluid through a collodion filter[4] or a Chamberland candle, hardening the clot and cutting sections,[5] or by electrolysis,[6] but they appear to have no advantage over the ordinary methods.

Cultural examinations for tubercle bacilli in pleural fluids are not very useful and are only occasionally made.[7] Animal inoculation is probably the most reliable test of all, but unfortunately it cannot be practised in every laboratory, and, moreover, does not yield sufficiently rapid results to satisfy the clinician. The bacterial findings obtained with 25 serous fluids are shown in the following table:—

| Method. | No. of cases. | No. of positive findings. | Percentage. |
|---|---|---|---|
| Films made direct from deposit ... | 7 | 2 | 28·6 |
| Teased clot ... ... ... ... ... ... | 9 | 2 | 22·2 |
| Antiformin ... ... ... ... ... ... | 7 | 2 | 28·6 |
| Artificial gastric juice ... ... ... | 16 | 4 | 25·0 |

Unfortunately, owing to small amounts of material obtained, it was not possible to employ every method in each of the 25 fluids, so that the results are not strictly comparable. Altogether bacilli were found in 10 cases out of the 25—i.e., 40 per cent. Cultures were made on ordinary media (both aerobic and anaerobic) in these cases, but no secondary infections were noted.

### B. *Purulent Fluids.*

Purulent tuberculous pleural fluids are apparently not so common as serous. Seven only were collected, as against 25 serous ones. These 7 were all cases of pyopneumothorax. In the case of pus physical, chemical, and cytological examinations are not so important. The search for the tubercle bacillus, moreover, is easier. Out of these 7 cases bacilli were found in ordinary film preparations (without previous digestion) in 5 instances. In the 2 negative cases repeated examinations on several occasions failed to reveal bacilli in the one instance, whilst in the other a secondary infection with B. pyocyaneus took place.

### *Conclusions.*

1. The finding of tubercle bacilli is the only conclusive evidence of tuberculous infection. In this series of cases bacilli were found in 40 per cent. of the serous and 71·43 per cent. of the purulent fluids. Ordinary film preparations are satisfactory in purulent fluids, but in serous more careful measures are often necessary. In large effusions without clot sedimentation and centrifugation of the fluid may be sufficient. When present, the examination of clot offers the best hope of finding bacilli.

2. In serous effusions the next best test is the lymphocyte count. Failing this, the tests in order of value are (*a*) protein content (usually 4–5 per cent.) and (*b*) specific gravity (about 1018).

3. Sterility on ordinary culture media is suggestive of tubercle in purulent fluids. It is not of much value in serous exudates, since some other effusions and most transfusions are also sterile.

4. Secondary infection was only noted in one instance.

I am deeply indebted to the members of the hospital staff for placing these puncture fluids at my disposal.

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[3] S. R. Gloyne, THE LANCET, Sept. 21st, 1912, p. 827.
[4] A. Dumpt, Comptes Rendus de la Société de Biologie, vol. lxxiv., 1913.
[5] D'Este Emery, Clinical Bacteriology and Hæmatology.
[6] C. Russ, THE LANCET, July 3rd, 1909, p. 2.
[7] Bezançon and Griffon: Comptes Rendus de la Société de Biologie, February, 1899.

## TUBERCULOUS MENINGITIS (BOVINE INFECTION) IN AN INFANT AGED 12 WEEKS.

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THIS case is of special interest on account of the early age at which the disease occurred and of the type of organism found. While it is recognised that a child may in rare cases be born tuberculous and harbour the tubercle bacillus without any obvious sign of its presence for some time, yet as a clinical fact one does not meet with manifestations of the disease, as a rule, within the first three months of extra-uterine life. But in the present instance there is a difficulty in accepting even this explanation of the case in so far that neither father nor mother presents any suspicion of tuberculosis, and the organism was found to be of the bovine type.

A *résumé* of the case was presented to the Glasgow Medico-Chirurgical Society on Feb. 21st of this year, the facts being as follows:—

The child was delivered with the aid of forceps on Jan. 3rd, 1912, evidently healthy and of average weight. One or two superficial abscesses which developed round the areola of one of the mother's breasts were evacuated and healed rapidly, otherwise the confinement was uneventful. For six weeks the child appeared to thrive, but from about this time he did not progress, and the mother on that account supplemented the breast-feeding with two feeds daily of diluted cow's milk. When he was eight weeks old I was called in because of a cough which had developed. There were a few moist râles in the chest, but these cleared up with simple treatment in a few days and did not recur. The mother had plenty of milk and the feeds of cow's milk were stopped. When 11 weeks old his condition began to give serious concern. He was pale, irritable, and seemed little more than his weight at birth. There was no vomiting and the bowels were regular. On the limbs there was an eruption resembling lichen. Two days later the head became retracted and the child cried most of the day. Kernig's sign was not present. At night he had a convulsion. Next day Dr. Leonard Findlay saw the patient along with me and the following points were agreed upon:—Temperature 97° F., pulse rapid; respirations irregular, being occasionally very fast; no vomiting and motions natural four times daily; pupils equal and active, but squint occasionally present; head retracted, but Kernig's sign absent; abdomen flaccid, no glandular masses felt, but liver slightly and spleen markedly enlarged; child fed with difficulty, but not comatose. Lumbar puncture was performed and some cerebro-spinal fluid was withdrawn. It was fairly clear, flowed easily, but could not be said to be under pressure. By evening the child became stuporose, refused food, and had several general convulsions. On March 26th (next day) the stupor deepened and he died that night barely 12 weeks old.

Permission was granted for a very limited post-mortem examination. The enlarged spleen measuring 4 inches by 2½ inches and riddled with small tubercles was removed, along

with a small piece of the liver which also contained tubercles. The peritoneal coat of the intestines was also partially examined but no tubercles were seen. The cerebro-spinal fluid had been handed to Dr. Carl H. Browning, director of the Clinical Laboratory, Western Infirmary, to be examined for Wassermann reaction and for tubercle bacilli. The former he reported negative, but found abundant tubercle bacilli with an exudate chiefly of polymorphs. Dr. J. Cruickshank, who made further examination of the organism for him, reported to the society that he obtained cultures directly from the fluid. These he considered conformed more to the human type of organism, but on careful inoculation tests were shown to be of the bovine type.

Dr. W. Blair M. Martin, University lecturer on bacteriology, kindly examined the spleen for me, and his report is as follows:—

The spleen was much enlarged and firm in consistence. Its maximum dimensions were 4 inches × 2½ inches × 1¼ inches, and it weighed 6½ oz. Its surface was studded with numerous greyish-white tubercles, for the most part discrete and of the size of large pin-heads, but at places confluent, forming areas about one-quarter of an inch in diameter. As seen on section, it was studded throughout with caseous tubercles which quite obscured the normal markings of the organ. In stained microscopical preparations the striking features are the absence of normal Malpighian bodies and their replacement by cario-necrotic zones of varying size which correspond with the greyish-white areas seen on naked-eye inspection. Giant-cell formation is scanty, the few that are present being apparently derived from the hyperplastic connective tissue of the sinuses. Very little lymphoid tissue remains in the spleen.

Only a small portion of liver was obtained. It showed numerous tubercles both beneath the capsule and throughout the organ. The liver tubercles are smaller than those in the spleen and on section are less necrotic, but in preparations stained by the Ziehl-Neelsen method they show more numerous tubercle bacilli, which are of the long, beaded type. Much's method of staining did not reveal a notably larger number of organisms in the lesions.

A tube of Dorset's medium was inoculated with a selected portion of spleen tissue. A scanty moist growth, which did not become luxuriant even after three months' incubation, slowly appeared. A subculture on a second tube of Dorset's medium gave a similar moist unheaped growth, well-grown within five weeks and not apparently increasing beyond that time. In films both cultures were proven to be pure cultures of acid-fast bacilli.

A small portion of spleen was emulsified with normal saline solution and injected subcutaneously into the groin of a guinea-pig. The animal died in 16 days. On examination an extensive "cold abscess" was found at the site of inoculation; the axillary, the inguinal, the mediastinal, and the retroperitoneal lymphatic glands were enlarged, and all contained minute tuberculous foci; the spleen was slightly enlarged, but no tubercles were visible in it; and there were no obvious lesions elsewhere in the body. Films made from the groin pus showed fairly well-preserved cellular elements, chiefly polymorphonuclear leucocytes, and numerous tubercle bacilli, many being intracellular. A rabbit intravenously injected with 1 minim of this groin pus died in 24 days from acute miliary tuberculosis. Tubes containing agar, Dorset's and Lubenau's media, were inoculated with the groin pus. No growth resulted on agar; three isolated colonies of acid-fast bacilli alone developed on Lubenau's medium; but on Dorset's medium an extensive moist growth slowly developed and attained its maximum within two months. Subcultures from this latter culture were made on both Dorset's medium and on Lubenau's medium, but Dorset's medium uniformly yielded the better growths. The strain was maintained in subcultures on Dorset's medium, the type of growth persisting as dysgonic. After nine months' artificial cultivation the pathogenicity was again tested on rabbits. 1 mgm. of moist culture from a two months' growth on Dorset's medium was weighed out and emulsified in 50 minims of normal saline solution. 5 minims of this bacillary emulsion (equivalent to 0·1 mgm. of moist culture) were injected intravenously into a rabbit. It died in 20 days with the lesions of acute miliary tuberculosis. 2 minims of the same bacillary emulsion were injected into the left knee-joint of another rabbit (Fraser's procedure). The animal was killed 39 days later. Save for a swollen and permanently flexed left knee-joint it appeared in good condition. On examination there was found to be a marked tuberculous arthritis of the left knee-joint with much peri-articular infiltration. The left inguinal glands were slightly enlarged. The lungs were studded with medium-sized centrally caseated tubercles. The spleen and kidneys also showed a few small tubercles, but the liver and mesenteric glands were free.

The foregoing data regarding growth on culture media and pathogenicity all indicate that the infecting agent in this case was the bovine type of tubercle bacillus. (The expenses of this pathological investigation were defrayed by a grant from the Carnegie Trustees.)

There is thus no doubt, then, that we are dealing with a bovine infection at this unusually early age. There remains to be considered the source of the infection. The father, mother, and only other child in the family have always been, and still are, perfectly healthy. An adopted boy, however, is not strong, and shortly after the death of the child had to have tuberculous glands removed from his neck. The operation, however, was performed in hospital, and did not come to my knowledge till afterwards. The infant was really breast-fed. Only after it had begun to show signs of malnutrition was that augmented by cow's milk, and then only for about a fortnight. There seem no sufficient grounds for supposing that the milk was the direct source of infection. The mother was suspicious of something being wrong before the milk was tried, and one must presuppose a very virulent infection to have caused death in six weeks after that event.

One can only speculate. Lymphatic gland infection is known to be frequently due to the bovine type, and presumably the entrance was from some part of the oral cavity. Koplik, in an article in the *Johns Hopkins Hospital Bulletin*, April, 1912, reviews the subject of tuberculosis in infancy and gives his "unreserved support to the contention," put forward by Escherich and his school, "that in a great percentage of cases infection can be traced to a person infected with tuberculosis who had been in the immediate vicinity of the infected child." It seems reasonable to suppose, though incapable of proof, that the adopted child was the source of infection in this case, he being the subject of a bovine infection of his cervical lymphatic glands, with a focus somewhere in his oral cavity.

Glasgow.

## THE FREE AIR TREATMENT OF SKIN GRAFTS.

BY A. ROCYN JONES, M.B., B.S. LOND., M.R.C.S. ENG.,
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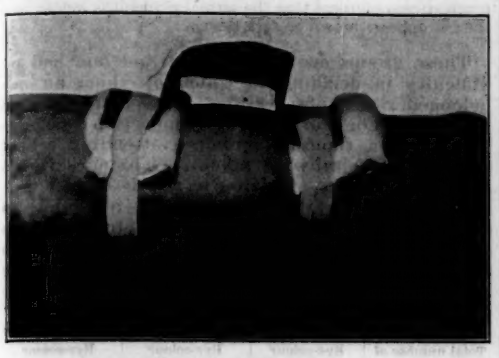
THE annotation which appeared in THE LANCET of June 14th last, p. 1682, with reference to a recent article upon Skin Grafting Without Dressings in the *Journal of the American Medical Association* and the subsequent letter of Mr. G. Lenthal Cheatle[1] are of interest. In 1907 a similar method, based on a short description by Nélaton and Ombrédanne,[2] was adopted by Mr. E. Muirhead Little at the Royal National Orthopædic Hospital. For some years previous to this he had applied dry dressing upon the grafts, but for the last six years a different technique has been carried out in all the cases where it has been found necessary to perform skin grafting.

The following is an account of the procedure.

Thiersch's grafts are applied to the raw area in the ordinary way, but no protective or dressing of any kind is allowed to remain in contact with the grafts. The next step is the application of a cage of wire and cotton gauze surrounding, but well away from, the grafts. A reference to the illustrations will

FIG. 1.



To illustrate mode of applying the bridge of wire gauze.

facilitate the description. A strip of wire gauze, broader than the area to be covered, is cut and fashioned so that it forms a bridge stretching well beyond the extremities of the grafted surface. The bridge, previously boiled, is put with its flanges resting on a layer of wool placed above and below the area, and is secured thus by strapping passing over each flange to the skin beyond. Over this structure two or three layers of sterilised

FIG. 2.

The cage complete.

cotton gauze are placed so as to form a complete cage for the grafts, taking care to fix the soft mesh only near its borders, this being done by several turns of bandage. By this means air is allowed to circulate freely through the gauze and over the grafts, thus promoting drying of the parts, whilst good protection is afforded from minor accidents, as dust or flies. An ordinary bed cradle is placed over the cage, and in the case of the lower limb it is well to separate the clothes at the bottom of the bed to permit free access of air. The cage is untouched until the fifth day after operation, when the bandage is removed and the soft gauze raised, but leaving the wire bridge intact. By this time black crusts will have formed between the edges of the grafts, and the appearance is often somewhat unpromising. With a sterile forceps the crusts are carefully picked off without doing the slightest damage to the new tissue. No attempt is made to wash or apply lotion to the parts. The bridge is left untouched during the whole of the after treatment, and after the crusts are removed fresh cotton gauze is applied and bandaged as before. In another three or four days further crusts may have to be dealt with, but the necessity for this gradually diminishes. In three weeks healing is usually complete.

We have found this treatment remarkably successful. Of 26 consecutive cases, in two only has it been found necessary to repeat the operation, although our experience here has been limited to fairly clean cases, and chiefly to those in which Mr. Muirhead Little's [3] modification of Phelps's operation has been performed. Wiener,[4] on the other hand, at the Mount Sinai Hospital, New York, has had the most gratifying results even with patients where there were discharging sinuses right in the area to be grafted. He packs the suppurating sinuses with iodoform gauze, and changes the packings as often as they become saturated with the discharge, without disturbing the grafts. Nélaton and Ombrédanne and Brüning [5] also speak well of it, the last insisting that good exposure to the air is the secret. Weischer,[6] however, rejects the principle, asserting that strict asepsis cannot be maintained by the free air method in the after-treatment. He adopts active treatment by applying a dressing of gauze soaked in warm saline, and insists that the grafts should never be allowed to dry, but kept moist. His technique has been chiefly used in scalp wounds and he does not appear to have given the free air plan an extended trial.

Brüning and Wiener dispense entirely with a cage, the parts being freely exposed to the naked eye. Wiener states that in grafts on the extremities the leg or arm is swung free from the bedclothes, and in the case of the trunk a cradle to keep off the bedclothes is all that is required. He does not touch the new tissue until seven or eight days after operation, when a weak ichthyol ointment is applied over the entire surface, the crusts dropping off under this dressing. As already mentioned, we prefer to use a cage and pick the crusts off with forceps, without applying anything upon the grafts. Benson,[7] who in THE LANCET in 1896 described an ingenious tin cage, places protective over the surface and maintains pressure for five or six hours, when he removes the protective and applies an antiseptic cage. Each day he douches the grafts with a 1 in 2000 perchloride of mercury solution. He has had excellent results and strongly praises this treatment, but in our experience neither the protective, in the early stage, nor the subsequent douching is necessary.

We may sum up the advantages of the method we use as follows: (1) its simplicity; (2) the infrequent dressing; (3) the grafts having no dressing in contact are less liable to be disturbed; (4) a perfectly dry surface is maintained; and (5) its remarkably uniform success.

I am indebted to Mr. Muirhead Little for a knowledge of this method and for the use of the records of his cases.

*Bibliography.*—1. THE LANCET, June 21st, 1913, p. 1763. 2. Les Autoplasties, par Ch. Nélaton et L. Ombrédanne (G. Steinheil, Paris, 1907). 3. Phelps's Operation for Club Foot, paper read in the Section of Surgery at the Annual Meeting of the British Medical Association,

Swansea, July, 1903, by E. Muirhead Little, and reported in the Brit. Med. Jour., Oct. 17th, 1903. 4. Skin Grafting without Dressings, Joseph Wiener, M.D., Journal of the American Medical Association, May 17th, 1913. 5. Ueber offene Wundbehandlung nach Transplantionen, von Dr. Med. F. Brüning, Zentralblatt für Chirurgie, Nr. 30, 1904. 6. Ueber die Wundbehandlung nach Transplantionen, von Dr. Med. Alfred Weischer, Zentralblatt für Chirurgie, Nr. 25, 1906. 7. The Treatment of Burns, Granulating Wounds, and Skin Grafts by the Antiseptic Cage, J. R. Benson, THE LANCET, Nov. 14th, 1896, p. 1373.

# EYE COLOURATION IN RELATION TO THE INCIDENCE, SEVERITY, AND FATALITY OF SCARLET FEVER AND DIPHTHERIA.

BY A. L. DYKES, M.D. EDIN., D.P.H.,
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THE subject of this paper was suggested to me by Dr. J. Biernacki on the ground that children with light eyes appear on the average to be more susceptible to severe diphtheria and more likely to die. The statistics on which it is based were collected at Plaistow Fever Hospital during the year 1912–1913. Several observers have shown that there is a relation between susceptibility to disease and pigmentation. Dr. F. C. Shrubsall[1] found that epilepsy and skin diseases were more common in the brown-eyed, while acute rheumatism more frequently attacked light-eyed people. Similar observations by Dr. David McDonald[2] demonstrated a correlation between pigmentation and susceptibility and recuperative power in the acute fevers amongst the school children of Glasgow. Scarlet fever was also included in the present observations, which were confined to the eye. It will be remembered that there are two kinds of pigment in the iris.[3] One, the stroma-pigment, varying greatly in amount in different individuals, lies in the branched cells of the stroma; the other, the retinal pigment, fills up the epithelial cells of the retinal pigment layer, and is fairly constant.

Stroma-pigment is brown in colour, and when it is deficient the iris appears blue or grey, according to the delicacy or coarseness of the stroma-fibres which allow the retinal pigment to become visible. Eyes which contain much stroma-pigment are dark brown, the retinal pigment being quite hidden. Between the blue or grey and the brown there are many shades of colour, varying with the amount of the stroma-pigment. C. C. Hurst[4] divided the eye colours into two chief groups. Those containing no visible stroma-pigment he classed as "simplex," and grade from blue to grey. Eyes containing visible stroma-pigment in addition to retinal pigment were termed "duplex." In this group are included eyes which at first glance appear grey or blue, but on closer inspection are seen to contain stroma-pigment, however small in amount; also brown or dark eyes which contain so much of it that the retinal pigment is quite obscured, together with all shades between these extremes. This classification has been adopted in forming three main divisions of eye colour.

*Group 1. The simplex type.*—This includes blue and grey and all shades of greyish-blue in which no visible stroma-pigment is present. No attempt has been made to separate blue simplex from grey simplex, as shades of the one merge into the other.

*Group 2. Duplex medium.*—This group contains eyes in which both kinds of pigment can be seen. The visible stroma-pigment may be small in amount surrounding the pupil and forming a brown ring, or, more frequently, it is seen as little brown spots scattered over the iris, the background in both cases being grey or blue; when these spots are very numerous and close together the colours blend to give the iris a greenish hue.

*Group 3. Duplex dark.*—Eyes of this group have so much stroma-pigment that the retinal pigment is hidden and the iris appears brown or dark brown.

These groups are very definite, and one had no difficulty in deciding to which of them an eye belonged. All observations were taken during daylight. For purposes of comparison the eye colours of a thousand children attending school near the hospital were taken. Their ages varied from 4 to 12 years. Bearing in mind the fact that as age advances the colour of the iris tends to darken, an endeavour was made to include a sufficient number at each age-period in order to approximate the age-constitution with that of the hospital patients. The following results were obtained:—

| Total number of school children. | Eye-colour simplex. | Eye-colour duplex medium. | Eye-colour duplex dark. |
|---|---|---|---|
| 1163 | 347 | 418 | 398 |
| Percentage 100. | 29·8% | 35·9% | 34·3% |

It is seen that the medium duplex slightly exceed in number the dark duplex, while the simplex form the smallest group. Compare these figures with those obtained from 679 cases of scarlet fever. In scarlet fever the dark duplex eye is relatively less common than in the general population; simplex and medium duplex are both in excess to about the same extent. The differences, however, are not great, and might not hold for larger groups.

*Scarlet Fever.*

| — | Number of cases. | Percentage. | Percentage severity. | Number of deaths. | Percentage fatality. | General population percentage (for comparison). |
|---|---|---|---|---|---|---|
| Eye-colour simplex... | 219 | 32·3 | 21·0 | 7 | 3·2 | 29·8 |
| Eye-colour duplex medium ... ... ... | 261 | 38·4 | 15·7 | 5 | 1·9 | 35·9 |
| Eye-colour duplex dark ... ... ... ... | 199 | 29·3 | 15·5 | 3 | 1·5 | 34·3 |
| Total number of cases ... ... ... | 679 | 100·0 | 17·2 | 15 | 2·2 | 100·0 |

For statistical purposes, those cases of scarlet fever were termed severe which had a definite complication such as otorrhœa, septic throat, arthritis, nephritis, marked adenitis, &c. Cases having marked pyrexia, toxic cases, and fatal cases were also included in this group. It would appear that scarlet fever is more frequently severe, and has the highest mortality in simplex-eyed children.

In diphtheria the colour selection was found to be more striking. In this disease cases which were markedly toxic and also fatal cases were tabulated as severe.

In diphtheria simplex-eyed children are definitely in excess as compared with the general population, while duplex-eyed children are in a minority, more marked in the case of the dark duplex type. The

[1] The Anthropometric Investigation of Hospital Patients, Brit. Med. Jour., December, 1904.
[2] Pigmentation of the Hair and Eyes of Children Suffering from the Acute Fevers, Biometrika, July, 1911.
[3] Fuchs's Ophthalmology.
[4] Proceedings of the Royal Society, vol. lxxx.

*Diphtheria.*

| — | Number of cases. | Percentage. | Percentage severity. | Number of deaths. | Percentage fatality. | General population percentage (for comparison). |
|---|---|---|---|---|---|---|
| Eye-colour simplex | 98 | 38·1 | 37·1 | 10 | 10·2 | 29·8 |
| Eye-colour duplex medium ... ... | 84 | 32·6 | 29·7 | 4 | 4·7 | 35·9 |
| Eye-colour duplex dark ... ... ... ... | 75 | 29·3 | 25·3 | 2 | 2·6 | 34·3 |
| Total number of cases ... ... ... | 257 | 100·0 | 31·5 | 16 | 6·2 | 100·0 |

fatality and severity rates are highest in the simplex and lowest in the dark, the medium duplex taking up an intermediate position.

Oldham.

# Clinical Notes:

## MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

### A CASE OF HAIRBALL IN THE INTESTINE.

By W. B. Hill, M.D., B.C. Vict., D.P.H. Oxon.,
PATHOLOGIST TO THE CROYDON MENTAL HOSPITAL.

THE following case appears to me to be worthy of publication in THE LANCET, as the presence of hairballs in the human alimentary canal is not a condition of common occurrence.

The patient was a woman, aged 66, who was admitted into the Croydon Mental Hospital on Sept. 26th, 1912. Her mental condition was one of agitated melancholia, with systematised delusions of a persecutory nature. She was in a poor state of health, being markedly anæmic and wasted. The abdomen was very pendulous and somewhat distended, but it moved well on respiration. A mass about the size of a tangerine orange could be felt in the right iliac region. It was freely movable, painless on manipulation, and did not appear to have any deep connexions. The percussion note was tympanitic all over the abdomen, and neither the liver nor spleen was palpable. Rectal examination was negative and after a simple enema the bowels acted normally. There was no vomiting. The pulse was small and very irregular, cardiac dulness increased to the right, the apex beat was half an inch outside the nipple line, and there was a double murmur at the apex. The patient also had chronic bronchitis with emphysema. There was no œdema of the extremities. She died suddenly in a heart attack a few days later.

*Post-mortem examination.*—The lower 3 feet of the ileum were strongly adherent to the lower part of the anterior abdominal wall. The right ovary and Fallopian tube were also firmly fixed in the adhesions surrounding the gut. Situated in the ileum about 5 inches from the ileo-cæcal valve was a mass occupying the lumen of the gut and about 4 inches in length, which on palpation gave the impression of being fæcal in nature. On opening the ileum this was found to consist entirely of hair of a reddish-brown colour, the strands of considerable length. The proximal portion of the ileum and the lower two-thirds of the jejunum were considerably distended. The ascending and descending colon and sigmoid were packed with scybala. The right ovary was enlarged to about twice its normal size and contained sebaceous matter, hair and teeth.

The hair was probably from the woman's own head, for her friends stated that when younger her hair was very light brown in colour. This being so the "ball" had probably been impacted in the intestine for some years.

I have to thank Dr. E. S. Pasmore, superintendent of the hospital, for permission to publish this case.

Warlingham, Surrey.

### A CASE OF SUDDEN DEATH: TUMOUR OF THE PITUITARY BODY.

By J. D. R. Monro, M.D. Glasg.

THE following case may perhaps be considered sufficiently interesting for insertion in THE LANCET.

On Sept. 7th I was summoned urgently to see a young man, 20 years of age, who was said to be suffering from severe headache. On arrival I found the patient in bed propped up with pillows. The history given by his mother was that he had had headache on and off for ten days, but had been able to remain at his work until the previous day. It was elicited that when he got up on the morning of my visit he had vomited, and his headache was so severe that he had returned to bed.

On examination I found the pupils dilated with a very slight response to a strong light. The pulse was 60 and soft, and the temperature was 100·6° F. By shouting to him I was able to make him understand my questions. He said he had a very bad headache. He then vomited and fell back on the pillow in a condition of semi-coma. I made a provisional diagnosis of meningitis, and ordered ice to the head and a smart purge. Two hours later I was again summoned, but on my arrival found the patient dead.

The post-mortem examination was made on Sept. 9th. The heart and lungs as well as the abdominal viscera were quite healthy. As the brain was removed the pituitary body was seen to be much enlarged. It was about the size of a cherry, and weighed about 75 grains. On section it appeared not abnormal in structure, but it was œdematous and had one or two small cysts in its interior. The meninges were œdematous, and the ventricles distended with fluid.

The most striking point about this case was the fact that the young man was able to attend to his business on the day before he died, and his parents did not think of getting medical advice about him until two hours before the end.

Muswell Hill, N.

### NOTE ON A CASE OF TUBERCULOSIS OF PERITONEUM COMPLICATED BY A STRANGULATED UMBILICAL HERNIA.

By G. W. Spencer, M.B., B.C. Cantab.,
M.R.C.S. Eng., L.R.C.P. Lond.,
HOUSE SURGEON TO ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

THE following note I take to be of interest owing to the rarity of an umbilical hernia becoming strangulated in a child.

On April 16th last a boy, aged 15 months, was admitted to Addenbrooke's Hospital, under the care of Dr. Joseph Griffiths, with the following history.

On March 26th the abdomen had become distended and the boy had cried during micturition. On April 9th a "swelling came through the navel, when crying, which could be easily pushed back." A pad and bandage had been applied which prevented the swelling coming through. On the 13th the child became "queer in hinself," crying and fretting, but not sick, and his bowels moved naturallv. The swelling rapidly increased in size on the 14th and became red and inflamed, and distension of the abdomen followed. At 5 P.M. on the 16th the swelling burst, but no notice was taken until 7 P.M., when ground rice came through the opening, the boy having been fed three hours previously.

On admission to hospital at 8.30 P.M. the abdomen was very distended. The umbilicus was protruded and the surrounding skin was red and inflamed. Immediately above the umbilicus there was a small opening through which fæces were being discharged. Temperature 100·4° F. and pulse 134. Fomentations were applied and feeds per rectum administered. Later, fluids were given by the mouth. On two occasions charcoal was given with the feed, and 3¼ and 3¾ hours respectively elapsed before it made its appearance at the opening. The patient progressively lost weight and soon became very thin.

On May 22nd the abdomen was opened in the middle line, and the peritoneum was found to be studded with miliary tubercles; in addition a mass of tuberculous mesenteric glands were found to which the intestines were firmly adherent. It was considered impracticable to unravel them or satisfactorily close the opening in the bowel. After this even rectal feeds were discharged through the opening, and the patient died on June 1st—47 days after admission.

*Post-mortem examination.*—The parietal peritoneum and surface of gut were found to be studded with miliary tubercles. Coils of the ileum and the transverse colon were adherent to each other and to the mass of mesenteric glands. The perforation of the gut had occurred in the middle of the transverse colon. This piece was excised and examined microscopically, but no sign of a tuberculous ulcer was seen at the site of perforation. The enlarged mesenteric glands were also examined. Tubercle bacilli were found in small numbers. An intraperitoneal injection of an emulsion of the glands caused the death of a guinea-pig from general tuberculosis in 43 days. The kidneys, spleen, liver, and lungs were normal.

Cambridge.

CENTRAL MIDWIVES BOARD.—A meeting of the Central Midwives Board was held at Caxton House, Westminster, on Nov. 20th, with Sir Francis H. Champneys in the chair. A letter was considered from the Clerk of the Council transmitting a copy of a note from the Foreign Office from the Norwegian Chargé d'Affaires in London requesting certain particulars respecting the training of midwifery pupils in the United Kingdom, and asking the Board to furnish a memorandum thereon. The Board decided that the reply as drafted by the chairman be approved and forwarded to the Clerk of the Council. A letter was considered from one of the Board's examiners calling attention to the ineffective training of a large number of the candidates for the Board's examination owing to the apparent absence of any system of classes at which questions may be asked and explanations given. The Board directed that the substance of the letter be communicated to all the examiners with the request that they will give the Board their comments upon it, the writer's name being suppressed and "examiner" being substituted.

# Medical Societies.

## ROYAL SOCIETY OF MEDICINE.

### SECTION OF THE HISTORY OF MEDICINE.

*The Visions of St. Hildegard in their Medical Aspect.—The Medical Aspects of the Greek Anthology.*

A MEETING of this section was held on Nov. 19th, Sir HENRY MORRIS, Bart., Vice-President, being in the chair.

Sir HENRY MORRIS drew attention to the volume of the portraits of Dr. William Harvey published by the section since its last meeting, and suggested that each member of the section should buy a copy.

Dr. CHARLES SINGER made a communication in respect to the Visions of St. Hildegard in their Medical Aspect. Hildegard, he said, was born at Boeckelheim in 1099 and died at Rupertsberg, opposite Bingen, in 1179. At the age of 8 she was placed in the hands of Jutta, a female recluse who lived on the Mount of St. Disibode, a few miles from Bingen on the banks of the Nahe. Jutta gradually collected a number of pious women and thus formed a nunnery. She died in 1136 and Hildegard took her office as prioress, but in 1149 she and some of her nuns migrated down the Nahe to Rupertsberg on the Rhine, where a second convent was built, and here she passed the rest of her life. Hildegard was a woman of extraordinarily strong and original character. The freedom and the terms with which she denounced even the Emperor Barbarossa himself as well as the visions she saw and the general setting of her life are not unlike those of the Hebrew prophets. She enters, said Dr. Singer, the field of the history of science by reason of several scientific works, some written by and others attributed to her. The "Physicas" is a collection of the scanty scientific knowledge of the twelfth century, and is of especial medical interest because it contains a description of the nature and uses of herbs. It is also remarkable on account of the sound hygienic teaching it contains. The "Liber simplicis hominis" gives valuable glimpses of the physiological conceptions prevalent in Germany in the twelfth century. Another work, "De Causis et Curis Morborum," attributed to St. Hildegard, is regarded by Dr. Singer—contrary to the generally accepted opinion—as spurious and probably collected early in the thirteenth century after Hildegard's death. The main interest in Hildegard centres round her work "Scivias"—a name she herself invented and subsequently declared to be a shortened form of "Scitovias Domini." This beautiful composition is full of moving and inspiring passages, and breathes a depth of spiritual understanding rare in any age. Medically, it is specially interesting from the fact that much of the text is presented in the form of visions. These visions are magnificently illustrated in a contemporary manuscript which is now at Wiesbaden. It was almost certainly prepared under Hildegard's personal supervision. Dr. Singer exhibited photographs and coloured illustrations which showed that the primary physical basis of the visions was migraine or scintillating scotoma. The miniatures exhibit typical fortification figures, stars, coloured spots, and in some cases a shimmering concentric appearance occupying the whole field of vision. There is also evidence from Hildegard's writings that in spite of her active and energetic life she had very poor health and suffered from a migrainous affection. Some of her visions present the interesting phenomenon of reintegration of other visions. In one instance Dr. Singer was able to demonstrate the separate elements out of which such a composite vision had been built.—Dr. R. HINGSTON FOX, speaking as a personal sufferer from migraine, thought Dr. Singer had proved his case. He suggested that the blue colours in the pictures were as important as the red, both these hues, as well as others, being characteristic of migrainous spectra. St. Hildegard's imagination, highly stimulated by spiritual influences, would make her symptoms vivid, and associating them with heavenly visions, she would fix her attention upon them until they could be depicted in the forms shown to us.—Dr. RAYMOND CRAWFURD and Dr. LEONARD G. GUTHRIE took part in the discussion, and Dr. SINGER replied.

Dr. J. D. ROLLESTON read the first part of a paper on the Medical Aspects of the Greek Anthology. Although the anthology had received much less attention than the Roman poets from medical historians, there were altogether about 400 epigrams out of a total of nearly 4000 which dealt more or less directly with medical subjects. They extended over a period of nearly 15 centuries, but the great majority were by writers subsequent to the establishment of the Roman Empire. Most of the medical epigrams were to be found in the Palatine collection, especially in the fifth, sixth, seventh, ninth, tenth, twelfth, and fourteenth sections, but there were also some in the Planndean collection and in the appendix. The paper was chiefly devoted to a consideration of the medical men concerned with the anthology either as contributors or as the subject of the poems. At least five of the contributors were medical men, and probably some of the anonymous epigrams were by doctors. The epigrams on medical men were divided into (1) panegyrics and (2) satires. The first group included epitaphs and other verses on the natural philosophers and physiologists who formed one of the principal sources of Greek medicine prior to Hippocrates, as well as similar epigrams on distinguished physicians such as Hippocrates, Galen, Asklepiades, and Praxagoras, and medical writers such as Nicander, Paulus Ægineta, and Marcellus of Side. Of the 20 doctors who formed the subject of the satirical epigrams, 14 were not spoken of by any other writer, and of the remaining 6 none could be identified with certainty. The satires were mostly the work of late writers, and like the epigrams of Martial were justified by the inadequate medical training due to the dissemination of the doctrines of the Methodist school. Consideration of the numerous other medical allusions in the anthology was deferred to the next meeting. —Professor RICHARD CATON spoke upon the paper.

Dr. CRAWFURD showed a collection of "Touch-pieces," and gave a short account of their history in connexion with the cure of the king's evil.

Dr. F. W. COCK showed an interesting collection of old surgical instruments, including a ritual circumcision knife.

## SECTION OF DERMATOLOGY.

*Exhibition of Cases.*

A MEETING of this section was held on Nov. 20th, Dr. J. J. PRINGLE, the President, being in the chair.

Sir MALCOLM MORRIS and Dr. S. E. DORE showed a case of Lupus Erythematosus with some unusual features—viz., the presence of itching in association with the eruption of the face; scaly patches on the chest and inguinal folds; a patch resembling psoriasis on one elbow, and lesions on the tongue and buccal mucous membranes.—Dr. G. PERNET regarded the condition as lupus erythematosus, a view with which Dr. H. G. ADAMSON agreed, but the PRESIDENT suggested the co-existence of seborrhœic psoriasis.

Dr. A. DOUGLAS HEATH (Birmingham) showed a Pigmented Eruption in a medical man which Dr. ADAMSON and Dr. PERNET thought was the adult form of urticaria pigmentosa, but Dr. A. WHITFIELD considered it to be a disease *sui generis* of which he had seen two cases.—Dr. A. EDDOWES suggested that it was an infection of sweat ducts.—The PRESIDENT, who had observed two similar cases, thought the presence of dermographism and the pigmentation brought it within the limits of adult urticaria pigmentosa.

The PRESIDENT brought forward a case of Mycosis Fungoides in a woman aged 40 years. The disease began in February, 1912, during puerperal fever, and the patient first came under observation as a *femme rouge* with universal erythrodermia, complete loss of hair, marked enlargement of spleen and lymphatic glands without leucocytosis, typical extensive lichenification, deep pigmentation, and a very small number of tumours. Points of special interest were the reappearance of hair on the scalp, eyebrows, and eyelashes, when the erythrodermia and infiltration diminished, despite fresh manifestations elsewhere.

Dr. ADAMSON showed another case of Mycosis Fungoides of five years' duration in a woman aged 65. She presented rounded plaques on the skin, but no tumours. There was no leucocytosis. She had had 40 doses of X rays in six weeks.—Dr. D. VINRACE asked for information as to the X ray treatment of such cases.—The PRESIDENT said he had a patient under his care who had been treated by X rays at very short intervals over a period of 15 years, the disease being thereby kept in abeyance.—Dr. DORE expressed the opinion that frequent repetition of the X rays was often imperative on account of the large areas of skin usually involved, the rapid progress of the disease, and the presence of commencing lesions under apparently healthy skin.

Dr. D. WALSH exhibited a case of Epidermolysis Bullosa in a boy aged 15, associated with congenital morbus cordis.—Dr. WILFRID S. FOX said he had seen an acquired case of this disease.—Dr. J. M. H. MACLEOD said there were records of acquired cases, although it was doubtful if they were true epidermolysis bullosa. He could not understand how congenital morbus cordis should stand in any relation to such a condition.—Dr. R. A. BOLAM (Newcastle) and Dr. F. PARKES WEBER could not detect any evidence of abnormality in the heart.—Dr. J. A. NIXON (Bristol) suggested a possible connexion between the Raynaud phenomena and the epidermolysis.—The PRESIDENT believed that low grades of the condition were common, and he was acquainted with several families the members of which blistered with abnormal facility. The case was referred to a subcommittee for report.

Dr. DUDLEY CORBETT gave a demonstration of a new Radiometer, an instrument for measuring the tint of the Sabouraud pastille which was now in daily use at St. Thomas's Hospital.—Dr. WHITFIELD, Dr. MACLEOD, Dr. J. H. SEQUEIRA, and Dr. AGNES SAVILL confirmed the great utility of the apparatus.

Dr. HALDIN D. DAVIS exhibited an infant 10 weeks old with extensive Psoriasis, and mentioned two similar recorded cases of three and ten weeks' duration respectively.—Dr. MACLEOD said he had shown a similar condition in an infant 4 weeks old which had recovered rapidly under treatment, a fact which suggested the diagnosis of seborrhœic eczema.—Dr. WHITFIELD asked if the scales had been examined microscopically for seborrhœic organisms.—Dr. ADAMSON said he called these cases seborrhœic dermatitis and had observed them in association with that disease in the mother.

Dr. PERNET showed an instance of Dermatitis Artefacta in a young woman who presented circular patches on the chest and back.

Dr. SEQUEIRA showed a girl with a very extensive and severe Eruption of Tuberculides, the lesions of the upper limbs being of small type and those of the lower limbs of large type. The condition followed a septic wound and tuberculous glandular swellings. The patient had never been free from lesions for seven years and had been treated with a course of tuberculin for three and a half years.—The PRESIDENT and Dr. WHITFIELD discussed the value of tuberculin in such cases, and Dr. MACLEOD asked for a report of a biopsy and inoculation of a guinea-pig, as he considered that these cases were true tuberculous infections.

Dr. SEQUEIRA also showed a case of Lichen Verrucosus in a farm labourer, aged 43, of five years' duration, who presented warty growths of large size symmetrically distributed on the extensor aspects of the fingers, hands, and legs.—The case gave rise to much discussion, and the PRESIDENT, while admitting the resemblance of the patches on the legs to lichen verrucosus, hesitated to accept the diagnosis.—Dr. ADAMSON regarded the case as of erythema multiforme type. —Dr. HEATH had seen it previously when the lesions were much more erythematous and not horny on the surface.—Dr. A. M. H. GRAY had had two somewhat similar cases, one of which he regarded as erythema elevatum diutinum, and another in a child associated with rheumatic nodules.—Dr. WHITFIELD thought the condition on the knees resembled lichen planus, but there was an early lesion which did not correspond with that disease.

Dr. SEQUEIRA also showed a case to illustrate the Luetin Reaction. This was not present in florid cases of syphilis, but he had found it in one primary case and in one instance in which the Wassermann reaction was negative, but which had improved under antisyphilitic treatment.—The PRESIDENT understood that the luetin reaction was inconstant and unreliable.—Mr. J. E. R. MACDONAGH said it was of no value in primary cases, and the same reaction could be obtained with many other substances.

Dr. WHITFIELD showed a case of Xanthoma Tuberosum in a woman, aged 53, of two years' duration.

Dr. E. EDDOWES showed a case of Lupus Erythematosus affecting the scalp and face of a young girl, in which regrowth of hair with altered pigmentation had taken place on a patch on the scalp.

Dr. GRAHAM LITTLE showed: (1) A case of a very Severe and Extensive Tubercular Syphilide which presented a considerable resemblance on the face to elephantiasis græcorum; and (2) a woman, aged 67 years, with Hypertrophic Lichen Planus of four years' duration, one of the masses having ulcerated. Histological examination confirmed the diagnosis of lichen planus and negatived that of malignancy.

## SECTION OF OTOLOGY.

*Exhibition of Apparatus and Cases.*

A MEETING of this section was held on Nov. 21st, Mr. RICHARD LAKE, the President, being in the chair.

Dr. W. H. KELSON brought forward a new Eustachian Bougie, the instrument consisting of a sliding scale to which the bougies were attached. It was so arranged that the distance which the bougie projected beyond the end of the Eustachian catheter was automatically marked on the scale. The whole apparatus was made of metal, hence it was easily sterilised by boiling; but gum-elastic bougies could be used if desired.—Several members discussed the appliance, some seeing possible danger of perforation with the finer varieties of a metal instrument.

Mr. FRANCIS F. MUECKE showed a case of Lateral Sinus Thrombosis of very severe nature, with pyæmia and other manifestations, which recovered after an illness of 14 weeks. The following is a brief outline of the case. The patient, a man aged 46, was admitted to the Eastern Fever Hospital as a case of typhoid fever, but the Widal test showed it was not that disease, and he was transferred to London Hospital. Nine weeks previously he had severe ear-ache on the left side, followed by a discharge which continued nearly two months. With its sudden cessation he had what was described as a bilious attack, which increased in severity, and he developed stiffness and pain on the left side of the neck. On admission to London Hospital his temperature was 102·5° F., the pulse being 100. The patient complained only of his neck; there was no headache, nausea, mastoid redness or tenderness, nor auricular displacement. A bead of pus was observed exuding through a small perforation in the upper half of the drum, and the neck presented a diffuse, red, tender swelling along the course of the internal jugular vein. The blood contained an increased number of polynuclear neutrophiles and large hyaline cells, and from a finger puncture a pure culture of streptococci was obtained. The cerebro-spinal fluid was normal. At the operation the bend of the lateral sinus was found to be gangrenous, and the vein was thrombosed practically from the torcular to the innominate vein. The internal jugular was ligatured below the clot, and the upper part dissected out and stitched to the upper angle of the incision. Much clot was removed by syringing, and it was found to be teeming with streptococci. A week later streptococci were still found in the blood, though the patient was doing well, the only untoward sign being an evening rise to 102°. Three days after the operation an autogenous vaccine was injected, and on five subsequent occasions determined by a marked rise in temperature. There was a drop in the fever following each injection. Ten days after operation the blood was reported sterile. Twelve days later the left popliteal vein was thrombosed, and four days afterwards the right popliteal was similarly affected. Then followed great pain over the right kidney, and blood and pus were seen in the urine next day. A sequel of this was cystitis and left epididymo-orchitis, and this in turn was followed by acute peritonitis. Mr. R. Warren performed laparotomy, and this marked the commencement of definite recovery. Mr. Muecke expressed his indebtedness to Mr. Hunter F. Tod for permission to show the case.

Mr. MUECKE also showed a case of Lateral Sinus Thrombosis with Paralysis of External Rectus.

Mr. G. J. JENKINS exhibited microscopic sections of a series of Endotheliomata.

## PATHOLOGICAL SECTION.

*The Primary Cause of Rheumatoid Arthritis.—The Pathogenicity of an Organism isolated from Non-ulcerating Cancerous Growths.—Mutation of Bacteria.*

A MEETING of this section was held on Nov. 18th, Dr. W. S. LAZARUS-BARLOW, Vice-President, being in the chair.

Dr. H. WARREN CROWE read a paper on the Primary Cause of Rheumatoid Arthritis, which was published in full in THE LANCET of Nov. 22nd, p. 1460.

Dr. E. P. MINETT contributed a paper on the Pathogenicity of an Organism isolated from Non-ulcerating Cancerous Growths. He came to the following conclusions: 1. The micrococcus neoformans was identical with that type of staphylococcus albus which could be isolated from deep tissues, both in human beings and in animals. 2. The coccus isolated from deep tissues was merely the ordinary skin staphylococcus modified by growing for considerable periods in the tissues where oxygen was absent or very scarce. 3. The above statement was justified by the fact that an aerobic growth of skin staphylococcus gradually assumed the characters of the micrococcus neoformans. 4. The serum of cancerous patients did not possess specific agglutinins for micrococcus neoformans in a greater degree than did normal serum. 5. Cancerous patients did not react in any marked degree to vaccine treatment with this organism. 6. The temperature was not affected by large doses of the vaccine nor could specified opsonins be detected.

Dr. J. A. ARKWRIGHT read a paper on Mutation of Bacteria, with special reference to diphtheria and typhoid bacilli, as the result of altering percentages of salt in solution.

## SUBSECTION OF PROCTOLOGY.

*Round-celled Sarcoma of the Rectum.—Recto-uterine Fistula.—Exhibition of Cases and Specimens.—Method of Administering Saline.—Hæmorrhagic Proctitis.*

THE first meeting of the new subsection was held on Nov. 12th, Mr. F. SWINFORD EDWARDS, the President, being in the chair.

Mr. ASLETT BALDWIN read notes of a case of Round-celled Sarcoma of the Rectum, illustrated by microscopic and macroscopic specimens. The growth was removed by resection of 6 inches of the rectum with preservation of the sphincter. It was detected in an early stage and formed a small submucous nodule still movable upon the muscle beneath.

Mr. BALDWIN also read notes of a case of Recto-uterine Fistula.

Mr. J. P. LOCKHART MUMMERY showed a case of Hæmorrhagic Proctitis. He also showed a woman upon whom in May, 1913, he had performed Abdomino-perineal Excision of the Rectum with resection of the posterior vaginal wall, and a specimen of a Colon removed by colectomy for auto-intoxication which remained unrelieved by lateral ileo-sigmoidostomy.

Mr. W. SAMPSON HANDLEY described a new method of administering saline after abdomino-perineal excision of the rectum, by which he claimed that the mortality of the operation could be greatly reduced. He recorded a series of nine cases of the operation, with one death.

Mr. LOCKHART MUMMERY read a paper on Hæmorrhagic Proctitis with illustrative cases.

The papers were discussed by the PRESIDENT, Mr. C. GORDON WATSON, Mr. H. GRAEME ANDERSON, Mr. CHARLES RYALL, Mr. HAMILTON DRUMMOND, Mr. L. E. C. NORBURY, Mr. DOUGLAS DREW, Mr. W. ERNEST MILES, Mr. LEES, and Mr. PERCIVAL P. COLE.

# MEDICAL SOCIETY OF LONDON.

*Continuation of the Discussion on Neurasthenia.*[1]

A MEETING of this society was held on Nov. 17th, Sir DAVID FERRIER, the President, being in the chair.

Dr. JAMES B. MENNELL continued the discussion on Neurasthenia by referring to four points in the treatment of neurasthenia by massage. He drew attention, in the first place, to the fact that massage should be considered in the light of a therapeutic agent, the dose of which must be prescribed with care and accuracy. Second, that in the treatment of neurasthenia by massage only the most gentle movements possible should be performed; any irritating (so-called stimulating) movements should be prohibited. Third, that any point that was tender or hypersensitive was the last that should receive attention, treatment of any part that had been injured being postponed till the portion of the nervous system that was connected to the rest of the body had recovered its equilibrium. Fourth, that the actual nature of the

[1] THE LANCET, Nov. 22nd, 1913, p. 1469.

massage movements employed were of no consequence provided that they were rhythmical. He pointed out that many neurasthenic patients owed their illness to the disturbance of the rhythm which was normal in the healthy nervous system, and that the hope of cure in these cases rested in the ability to restore that rhythm. The one hope of being able to do this lay in the application of massage, such as was devised by Lucas-Championnière, a massage that consisted of a smooth, gentle, rhythmical stroking of the surface of the skin.

Dr. CLAUD FOTHERGILL said that he had taken cases of neurasthenia into his own private house for the last six years, and so had had extended opportunities of observing the effects of various forms of treatment. He took three patients and had one, two, or three nurses according to the requirements of the cases. At the outset a prolonged period in bed seemed invaluable; it made the patient more restful, helped to get rid of the insomnia, allowed weight to be put on in those who had wasted, and he had also found that getting the patient up after being in bed for some time had a real suggestive value. Whilst in bed those who had wasted should be fed to excess, and plenty of milk should be given; the stout ones should be dieted carefully. Massage should be employed in all cases, but where ordinary massage did not suit the patient the type known as effleurage should only be used, and preferably at bedtime, with only a dim light in the room; this would send many patients to sleep whilst actually being massaged. Galvanic and faradic electricity were useful, the latter where the patient complained of a violent headache; in some cases it was exciting, and here galvanism with a very weak current should be used for its suggestive value. Suggestion had to be employed throughout the whole treatment, and the patient constantly reassured that there would be recovery. Windows should be widely opened. For insomnia medinal should be given each night in gradually decreasing doses, and paraldehyde occasionally for any unusual restlessness, and a mixture of potassium bromide to begin with to help the patient to settle down more easily to the life in bed. Constipation probably righted itself with massage and the very liberal diet, but where necessary liquid petroleum was useful, with calomel once a week followed by salts. In alcoholic neurasthenics, in addition to the rest of the treatment, he used hypodermic injections of atropine and strychnine three or four times a day, and gave them a mixture containing the same drugs. He found the blood pressure in what he would call primary neurasthenia almost invariably low, and where it was high or due to arteriosclerosis, &c., the case was likely to take far longer to get well. After the period in bed was over the patient had to be let down gently and interested in as many healthy pursuits and hobbies as possible, such as walking, golf, tennis, fishing, poker work, collecting flowers, or gardening.

Dr. S. A. KINNIER WILSON said it was clear from a consideration of the various contributions already made to the discussion that neurasthenia was regarded from widely differing view-points, and that Beard's original description of "American nervousness" as a physical and not a mental state was evidently not accepted by several of the speakers. It was not absolutely necessary to have an exact definition of the term "neurasthenia," for there was obviously a general unanimity as to the sort of case to be included under the expression. He thought that the term had been unjustifiably widened to include much that belonged symptomatologically to other conditions. Dana, of New York, wrote an instructive paper some years ago on "The Passing of Neurasthenia," and he was greatly inclined to agree with Dana's conclusions as to the desirability of reducing the scope of the term as far as possible. He wished to direct attention to a class of cases frequently and complacently described as neurasthenia which belonged to a different system altogether, and which it was desirable thus to separate chiefly for therapeutical reasons. He referred to the group known as "cardiac neurasthenia," "pseudo-angina," but preferably as "vaso-vagal attacks," as suggested by Sir William Gowers. In his experience the condition was very far indeed from uncommon, and he had seen many cases of this condition slumped with the large and inchoate neurasthenic group, to the detriment of both. As a rule these vaso-vagal attacks were more or less periodic, and in some instances at least might fairly be considered as epileptic equivalents. In some ways they are analogous to attacks of migraine. The symptoms were, briefly, palpitation and cardiac irregularity, a feeling of suffocation, of difficulty in breathing, icy coldness of the extremities, an epigastric sensation, followed by trembling, clammy perspiration, hot flushes; sometimes there was obvious pallor, a small pulse, and an approximation to a state of collapse. In many instances the patient complained of a feeling of mental anguish or fear, of vague dread, even of impending death. Such attacks were clearly due to instability of the vagus nuclei in the medulla oblongata and of the adjacent vaso-motor centres, and whether in a complete or incomplete form they were so frequent as to render their recognition and separation from neurasthenia very desirable. Treatment with nitroglycerine, or with liquor trinitrini, was often strikingly successful in such cases. It was true, however, that similar symptoms occurred in not a few cases of true neurasthenia, and in such cases he regarded the symptoms as an episodic syndrome in the course of neurasthenia. Vaso-motor irritability, indeed, was one of the cardinal symptoms of that disease, and he had found it advantageous to recognise this and to use vaso-motor stimulants and regulators where the vaso-motor symptoms formed a prominent part of the clinical picture. It was important to remember, further, that in the so-called neurasthenia of the climacteric many of the symptoms were clearly of a vaso-vagal nature, and it was incumbent on the physician to emphasise the relationship between symptoms of sympathetic origin and the functional upset of the glands of internal secretion which was liable to occur at the menopause. There was a most intimate association between the function of the glands of internal secretion and the sympathetic system. He considered it probable, therefore, that not a few of the common symptoms of neurasthenia were the result of disturbance of glandular equilibrium. He could see no difference between the asthenia of neurasthenia and the asthenia of Addison's disease from a clinical point of view. Without going further into the questions which a consideration of these analogies raised, he wished to impress on the physician the importance of paying due attention to sympathetic and glandular symptoms in the treatment of neurasthenia.

Dr. JAMES STEWART thought that neurasthenia was much more favourable in male subjects than in female.

Dr. W. P. S. BRANSON said that the few remarks he had to make would be directed to cases of true neurasthenia, in which the physical element was pronounced. Much had been said about the neurasthenic constitution, and it was true, he believed, that without it neurasthenia did not arise. Nevertheless, he ventured to think that too much was made of it, and too little of the determining causes in the absence of which the potentialities of the neurasthenic constitution were not brought into play. If he were to ask the audience what was the predominant characteristic of neurasthenia, he thought that a general answer would be—the capriciousness of its manifestations. For the purposes of illustration he might cite a fairly well-defined type which was not uncommon. An adult, young or middle-aged, complains of perpetual, violent, and unaccountable variations in health. He wakes well; but between morning and afternoon is overtaken by a feeling of great physical lassitude, often accompanied by an apparently indescribable sense of oppression of spirits. Towards evening, or early in it, he becomes very drowsy, but his sleep gives way in the early hours of the morning to an agitated state of wakefulness which may last for hours. The following day may be like its predecessor, or, on the other hand, may be one of perfect well-being. And so his life is spent in a series of perpetual undulations between sickness and health, though he may throughout wear the aspect of one physically well. The sense of insecurity bred of these experiences was of course extremely damaging to enterprise and material success, while it happened not infrequently that such a victim might, in an access of dejection, throw up his life's work, only to regret the step most bitterly when, within a month, or a week, or even a day, he recovered his well-being. Assuming, then, that caprice was of the essence of neurasthenia, how was that caprice to be explained? To him it did not read like a fault of tissue, nervous or other, for faults of tissue did not pass in a day; but rather as a fault, temporary in character, in the conditions under which the tissues were doing their work—a fault, one might suppose, in the constitution of the tissue fluids or in the

physical conditions under which the exchanges incidental to life took place. He had spoken of his agreement with others in believing that the neurasthenic constitution was essential to the production of neurasthenia, so he ought to explain what he meant by the term. His conception of the neurasthenic constitution was that of a protoplasm abnormally irritable, and unduly facile in response to all extraneous influences. It was obvious how idiosyncratic these people were in their behaviour to drugs, and how careful one had to be in physicking them. And so it was, he believed, with all the impressions which reached them. If this conception were correct, one should look for the determining causes of neurasthenia to some kind or kinds of anomaly which would be variable, transient, and of little intrinsic gravity, known to concur with neurasthenic manifestations, or at the least theoretically adequate to produce the passing vagaries of function which stamped the disease. Having said so much he hoped he would be forgiven if he gave a short list of causes which he believed to be the determining causes in a good many cases. Firstly, Dr. Hyslop had said on the last occasion that excessively low blood pressure was a common event in neurasthenia. He agreed, and submitted it as an adequate cause. Secondly, a good many people had tried to show that a diminished acidity of the tissue fluids was common in this disease. Certain it was that a great many neurasthenics frequently passed a urine which was unduly alkaline, and milky from precipitation of its phosphates. He submitted than hypoacidity was an adequate cause. Thirdly, it was well-known that gouty people, and especially those suffering from so-called irregular gout, were very liable to neurasthenic phases. He submitted that metabolic accumulations, normal or abnormal, were an adequate cause. Fourthly, he must mention hyperchlorination, though with diffidence, for it was easy to become a crank in these matters. Sodium chloride was the only common article of diet, except water, which passed freely and unaltered into the circulation; it was taken in quantities enormously in excess of requirements by many people, and was known to be retained in the tissues. He had himself recovered nearly 3½ drachms of sodium chloride in excess of what was taken with milk from a neurasthenic man in the course of 17 days. Considering the extraordinary forces exercised by salts in solution, he thought hyperchlorination must be admitted as an adequate cause. Fifthly, one could not disregard intestinal toxæmia, although he fancied we had heard more about it lately than it deserved. Sixthly, and lastly, not because of its importance but of our ignorance, he would put faulty correlation of internal secretions. It was certain that many of the symptoms of hyperthyroidism were neurasthenic in quality, and the same was true of the symptoms of the menopause. He suspected that the future would show a large dependence of neurasthenic states upon faulty relations of these secretions. If there were truth in these hypotheses it followed that, however largely neurasthenic states were overlain by auto-suggestions and emotional complications, the foundations of permanent cure lay in physical means; and such experience as he had led him to believe that such remedies as acid phosphate of soda, abundant water drinking, limitation of chlorides, purgatives, and sour milk, and lastly, but not least, exercise, which among its other virtues presumably acted as a stimulant of the internal secretions—all these used with discrimination and in their season were of the greatest service. Not that he wished to belittle psychotherapeutic measures such as reassurance and explanation, but that he believed the essential basis of neurasthenia proper to be physical and not ideogenic.

Mr. ERNEST CLARKE, after alluding to the inappropriateness of the term neurasthenia, mentioned the importance of never forgetting that it was not a disease but only a group of symptoms. He referred to the prime importance of always eliminating eyestrain before attempting to treat a neurasthenic. He showed that the cause was generally a small error of astigmatism which the patient could correct himself unconsciously, or a very slight want of muscle balance (heterophoria) which by its correction led to waste of nerve energy, which correction it was so important to relieve the eye from, since it was such a potent cause in producing so-called "functional" nerve trouble. He emphasised the extreme importance of testing the patient under a cycloplegic in all cases. He thought that the reason why rest did so much for the neurasthenic patient was that it gave the brain time to get rid of waste products which were being too rapidly formed. He referred to the important part which intestinal toxæmia played in lowering the power of accommodation of an individual and thus ageing him and probably rendering him liable to eyestrain. He thought that suggestion played a great part in the cure of neurasthenia, and that those called upon to treat neurasthenia should from the start establish the patient's faith in them and be most emphatic and didactic in the orders they issue for treatment.

Dr. G. E. SHUTTLEWORTH said that a certain number of children who were unfit for education in a public elementary school could properly be called neurasthenic. For these, instruction in a special school, particularly if it were combined with an open-air school, would be valuable. Schools between the ordinary ones and those for mentally defective children would be useful for temporary treatment. Afterwards the children could return again to the elementary schools. Much had been said about over-pressure in such cases, but the danger from this was much less real than that from bad home surroundings, insufficient food and clothing, to which they would be subjected if they were excluded from school altogether. Suitable occupation was preferable to none, and undue importance had been attached to self-abuse, but he thought that this was more often a symptom than a cause of neurasthenia.

Dr. J. CURTIS WEBB spoke of the efficacy of electrical treatment in certain suitable cases. High frequency only acted by lowering the blood pressure; static electricity, however, was of great value. There were two distinct classes—those benefited by application of the positive pole and those by application of the negative pole. The cases improved by the one were made worse by the other. This, he thought, was evidence that electrical treatment was of value otherwise than by pure suggestion. The negative pole served to stimulate, the positive to soothe.

The PRESIDENT said that it was clear from the discussion that the divergent views held with regard to treatment were largely due to the fact that all were not talking upon the same subject. The term "neurasthenia" was a limbo to which all kinds of nervous affections had been relegated. It was most important to recognise the truth that all the symptoms of neurasthenia might be met with in patients in good bodily health. Normally the sense of fatigue was not unpleasant, and it was only when effort had been forced in spite of fatigue, so that exhaustion was produced, that neurasthenia developed. In neurasthenics the sense of fatigue arose before it should do so normally, and this was the essential factor of the neurasthenic state. For physical exhaustion the rest cure and its adjuncts were of great value, but for the treatment of the neurasthenic, improvement of the morale was the essential part. For this, rational psychotherapy was the ideal treatment, to which the most inveterate neurasthenia yielded. All other treatments were merely adjuncts to it.

Dr. RISIEN RUSSELL briefly replied.

## WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

*Exhibition of Cases.*

A MEETING of this society was held at the West London Hospital on Nov. 7th, Dr. F. S. PALMER, the President, being in the chair. The following cases were shown:—

The PRESIDENT: 1. A case of Pseudo-Hypertrophic Paralysis in a patient aged 7 (the elder of two children, both boys). 2. A case of Morbus Cordis and Hemiplegia in a female, aged 22 years, who had been blue as long as she could remember, with shortness of breath on the least exertion. Acute rheumatism at 17; again at 19. Sudden left hemiplegia in March, 1912, clearing up gradually. The degree of cyanosis was remarkable and the clubbing of fingers and toes most marked. Cardiac area increased, the apex beat being in the fifth space in the nipple line. Loud harsh systolic bruit over pulmonary orifice conducted upwards and to left. Double mitral at apex, outwards to axillary line. Loud aortic double bruit at third right costal cartilage.

Dr. E. ARTHUR SAUNDERS and Dr. R. MORTON: Six cases of Early Pulmonary Tuberculosis in children between 5 and 10. No physical signs in the lungs, but wasting, irritable cough, and night sweats. Dr. Morton's skiagrams

showed very clearly enlargement of glands at root of lung, also some invasion of root of lung itself in every case.

Dr. RUSSELL STEELE (for Dr. Saunders): A case of Congenital Syphilis in a child. Mother gave positive Wassermann reaction. No signs of interstitial keratitis or other obvious signs of syphilis. Wassermann reaction strongly positive. Neosalvarsan 0·45 grm. intravenously on Oct. 16th. No improvement.

Dr. SAUNDERS: A case of Congenital Dilatation of Capillaries in a child aged 7. Exaggerated mottling of the skin present from birth, most marked over the malar regions, extensor surfaces of the forearms and hands, and flexor surfaces of buttocks, backs of thighs, and legs. A line about one finger's breadth of normal skin over right buttock. No cardiac lesion discoverable. Hands usually rather cold, becoming cyanosed on exposure to cold.—The PRESIDENT said the appearance of these vascular patches suggested something between so-called port-wine stains and a modified form of Raynaud's disease.

Mr. ASLETT BALDWIN: 1. A case of Traumatic Asphyxia and Hæmorrhage into the Cervical Cord. The patient, aged 26, was crushed between a lift and a balance weight on Oct. 28th. He was unconscious and cyanosed, breathing laboriously; pulse very weak. Several ribs on left side broken; extensive surgical emphysema on left side of chest, abdomen, and back; pupils dilated, very sluggish. On the 29th he began to regain consciousness, but the emphysema continued to spread. Sputum slightly blood-stained. On the 30th he regained consciousness, emphysema was disappearing, and there was much muco-purulent sputum tinged with blood. General blueness disappeared, leaving a permanent blueness of face and neck, and conjunctival hæmorrhages in both eyes. Marked weakness and loss of reflexes in all muscles supplied from the brachial plexus, probably due to minute hæmorrhages into the cervical cord. The patient was improving rapidly, and complete recovery was expected. 2. A case of Implantation of Rib to replace loss of bone due to compound comminuted fracture of tibia and fibula. The operation was done about 16 days ago and new bone formation has already occurred.—Dr. A. OGIER WARD considered the case opportune as the press was busy discussing euthanasia in apparently hopeless cases. This patient recovered, though in the opinion of competent men he had not an hour to live. If once the principle of euthanasia were admitted this case would surely have been held to justify an overdose of morphia.

Mr. N. BISHOP HARMAN: Cases of Syphilitic Uveitis. Salvarsan had been used in the first of the cases without benefit. He also showed two young men and a girl recently arrived from Greece who were affected with Trachoma. But for the continual importation of cases from abroad this disease might be stamped out altogether.

Dr. HAROLD PRITCHARD: Two cases of Morbus Cordis, with well-marked valvular lesions, the results of acute rheumatism; a short-chained streptococcus found. When first seen the cases were clinically identical, but one proved a true case of infective endocarditis, with arterial emboli, the patient going steadily downhill; the other one of simple endocarditis with pulmonary emboli, the positive blood culture probably due to transitory blood infection. These cases showed the difficulty of diagnosis in the early stages between simple and infective endocarditis, and emphasised the importance of combining clinical observations with the bacteriological findings.—The PRESIDENT discussed the cases. In his experience of malignant endocarditis neither serum nor vaccine therapy had been of any use.

Dr. T. GRAINGER STEWART: A case of Syphilitic Disease of the Cervical Spine with sensory symptoms referred to the distribution of the upper cervical root areas. Syphilis seven years ago, not treated. X ray examination showed changes in the upper cervical spine, some destruction of the bodies of the vertebræ, and considerable overgrowth and new formation. Wassermann reaction strongly positive. A second case was one of Toxic Polyneuritis affecting specially the lower motor neurone in a girl aged 17. In the beginning of August, 1913, patient felt weak, easily tired, and found difficulty in walking. In three weeks' time she was unable to stand and the hands became weak. No constitutional disturbance and no evidence of arsenical, lead, or alcoholic poisoning. No history of diphtheria, and cultures were negative. Present condition, complete flaccid paralysis of both lower extremities. Weakness of the trunk muscles and intercostals and both arms but no absolute paralysis. Leg muscles much wasted, those of arms less so. All deep reflexes in arms and legs abolished. Superficial, epigastric, and abdominal diminished. Marked loss of sensibility to all forms of cutaneous sensation in the distal portion of the limbs, with some loss of sense of position. General state good. Wassermann reaction of blood and cerebro-spinal fluid and culture from cerebro-spinal fluid negative.

Mr. OSWALD L. ADDISON: 1. A case of Syphilitic Osteoperiostitis in a female child affecting the upper end of right ulna and both tibiæ. 2. A case of Abdominal Tuberculosis in a boy aged 13. Admitted to the Hospital for Sick Children, Great Ormond-street, February, 1913. History of four days' illness: pain in abdomen and diarrhœa; indistinct mass in hypogastric and umbilical regions. X ray of chest showed scattered opacities in both lungs and a large shadow at the left base. On March 6th patient was transferred to a convalescent home at Highgate. After four or five weeks he was able to be out of doors all day. The main interest of the case was the remarkable increase in weight. Weight March 6th, 1913, 4 st. 4 lb.; Sept. 6th, 5 st. 10 lb., since when patient has put on another half to three-quarters of a stone. 3. A case of Acute Appendicitis with General Peritonitis in a boy aged 7, admitted to the hospital desperately ill, almost comatose, on June 4th, 1913. Under spinal anæsthesia the abdomen was opened, the gangrenous appendix removed, and tubes placed in the right iliac fossa and the right and left hypochondriac regions. It seemed impossible that the patient should recover, two attacks of cardiac failure on the second day nearly proving fatal. The condition gradually improved, but on the 20th a residual abscess of the left iliac fossa was opened. A day or two later the whole of the left lung became solid, the temperature ranging between 104° and 102° F., gradually falling to normal by the 29th. During this attack of pneumonia the original wound, which had been bathed in pus since the first operation, gave way and some coils of small intestine prolapsed, owing to the constant cough. On July 1st the bowel gave way, and by the 5th the greater part of the intestinal contents were being discharged over the skin of the abdomen. On the 5th the partially prolapsed bowel was separated from the margins of the wound, 12 inches of badly damaged intestine resected, and a lateral anastomosis performed. The temperature gradually fell to normal and the patient took food well, but was wasted to an extreme degree. The abdomen was flat; there was no pain, but cough persisted. Empyema was suspected, but exploration proved negative. A fortnight after the enterectomy a fæcal fistula again formed, the wound having almost healed. A second enterectomy was performed, and about 1½ pints of pus were evacuated from the chest. Convalescence was very slow, but the patient was able to leave the hospital nearly three months after the commencement of the illness. The vitality of the child was simply amazing. All the operations but one were performed under spinal anæsthesia, and it seems certain that the patient would have succumbed to any of the operations had a general anæsthetic been used. Mr. Addison attributed recovery to the continuous use of saline solution per rectum, subcutaneously and intravenously, combined with the unremitting attention of the house and nursing staff.

Mr. H. TYRRELL GRAY: 1. A case of a Sarcoma of a Keloid of the Eyebrow in a patient aged 2 years and 11 months. 2. A case of Implantation Dermoid following Circumcision. 3. A case of Sarcoma (?) of the Maxilla in a boy aged 10.

Dr. A. C. D. FIRTH: A man, aged 32, with marked Scoliosis of the Lower Cervical Vertebræ, present since birth. The presence of an extra wedge-shaped vertebra, apparently between the sixth and seventh cervical, was shown by the X rays.

## LIVERPOOL MEDICAL INSTITUTION.

*Exhibition of Specimens.—Intramural Extension in Rectal Cancer.*

THE first pathological meeting of the session was held on Nov. 13th, Mr. F. T. PAUL being in the chair. The following specimens were shown and described:—

Mr. R. W. MURRAY: (1) A Large Sacculated Popliteal Aneurysm from the amputated limb of a man 56 years of

age; (2) the Amputated Leg of a woman, 50 years of age, with elephantiasis. The limb after amputation weighed 64 lb. The patient had never been out of this country, and had carried on her work up to the time of her admission to hospital.

Mr. A. ADAIR DIGHTON showed sections illustrating Sarcoma of the Nose, one section being of the nasal tumour and the other of the glands in the neck.

Mr. R. STOPFORD TAYLOR and Dr. R. W. MACKENNA showed a Nasal Polypus of Tuberculous Origin.

Mr. G. P. NEWBOLT showed: (1) Myxoma of the Parotid; (2) Epithelioma of the Jaw.

Mr. R. E. KELLY and Professor ERNEST E. GLYNN showed: 1. Some specimens from three cases of Abdominal Trauma. They included ruptured liver, ruptured spleen, fat necrosis, &c. Mr. Kelly considered that the rectus aponeurosis was the best material to use for suturing the liver; this material did not cut through. 2. Carcinoma of the Pylorus removed at operation. 3. A Congenital Cystic Kidney. 4. A Suicidal Gun-shot Wound of the Skull.

Dr. J. H. ABRAM and Professor GLYNN showed a specimen of Polypoid Colitis in a girl associated with chronic diarrhœa. One portion had developed into columnar cancer with metastases in the liver.

Professor GLYNN showed: (1) Tuberculosis in the Lung of a Camel; (2) Tuberculosis in the Pericardium of an Ox; (3) Melanoma in the Liver of a Horse; (4) Perihepatitis in a Horse; and (5) Nutmeg Liver in a Pig.

Dr. NATHAN RAW showed: 1. A specimen of Acute Tuberculous Pericarditis in an adult, aged 30, secondary to miliary tuberculosis of the lungs. During life 40 ounces of fluid were withdrawn by paracentesis with marked temporary benefit. 2. A Lung showing Healed Tuberculosis in the Upper Lobe. The man, aged 59, died from acute pneumonia but had consumption when 35 years of age and had been quite cured.

Mr. D. DOUGLAS-CRAWFORD showed: (1) Endothelioma of Testicle, and (2) Foreign Body (brooch) from Intestine. Cotton-wool had been administered and the brooch had been passed wrapped up in it.

Mr. R. C. DUN showed: 1. Microscopical Section of Congenital Fibroma of the Finger, removed from an infant 9 weeks old. The tumour was of the size of a cherry, pedunculated, and grew from the palmar surface of the digit. 2. Microscopical Section of Wall of Brachial Cyst. The lining consisted of stratified epithelium and typical masses of lymphoid tissue were present. The cyst was removed from a boy aged 12 years. It occupied the position of the second brachial cleft; it was of the size of a tangerine orange and had only been noticed for 12 months.—The specimens were discussed by Mr. PAUL, Mr. DOUGLAS-CRAWFORD, Professor GLYNN, Mr. C. YORKE, and Dr. W. BLAIR BELL.

Mr. K. W. MONSARRAT and Dr. T. J. WILLIAMS communicated a paper on Intramural Extension in Rectal Cancer. The paper presented the results of complete histological examination of the specimens derived from four cases of operation for rectal cancer. The specimens were cut in serial sections, and the staining method employed was mucicarmine and hæmatoxylin. It was considered that it was incorrect to look upon mucin as a degeneration product or its presence indicative of growth ineffective from the point of view of metastases. It was shown in the observations reported that infiltration was widest in the planes of the longitudinal muscular coat and the cellular tissue outside it. No permeation of lymphatic plexuses to a distance beyond the primary site was demonstrated. In particular, it was not found that permeation took place in the plane between the bases of the follicles and the muscularis mucosæ. In one of the specimens it was shown that the growth was present within the venules in the muscular coat and the adventitia. The specimens were representative of the commonest type of rectal cancer, a fibrous stenosing carcinoma. They went to show that the disease remained local for a considerable period, that glandular invasion might be considerably delayed, and that longitudinal extension in the rectum was not rapid and wide, but comparatively slow and restricted. The authors considered that while abdomino-perineal amputation was the operation of choice for carcinoma, resections and amputations less extensive than this procedure offered fair prospects of cure, and that it was, therefore, justifiable to undertake such operations when for any reason a complete amputation appeared to be contra-indicated.—Professor GLYNN analysed 50 post-mortem examinations on patients who had died from cancer of the large intestine in the Royal Infirmary. The rectum was affected in 20, and the pelvic colon in 10 cases. Metastases other than those in the lymphatic glands in the neighbourhood of growth were present in only 19 cases. Thirty died from peritonitis, including cellulitis or abscess formation. In 9 there was acute ulceration of the intestine at some distance from the stricture.—Dr. BLAIR BELL discussed the frequency with which malignant growths of the rectum invaded ovarian cysts; and contrariwise he had found ovarian carcinoma sometimes invaded the rectum to such an extent as to make it difficult to decide at operation which was the primary growth. Histological examination usually made this question clear.—Mr. PAUL, Mr. NEWBOLT, and Mr. R. W. MURRAY also spoke.—Mr. MONSARRAT replied.

## EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

*Exhibition of Cases.*

A CLINICAL meeting of this society was held in the Royal Infirmary on Nov. 19th, Dr. JOHN PLAYFAIR, the President, being in the chair.

Dr. DAWSON TURNER showed: 1. Cheloid on the Left Cheek of a female, aged 21 years, which he was treating by radium. The patient had suffered from an extensive port-wine stain. With a view to removing this it had been treated by carbonic acid snow and nitric acid, but it developed a cheloid in the lower portion; this extended rapidly, but had yielded to radium, and the port-wine stain was also disappearing. The dose had been 399 milligramme hours. 2. A Nævus in the Cheek of a male child, aged 17 months, under treatment by radium. The dose had so far been one of 44 milligramme hours.

Dr. NORMAN WALKER showed a case of Nævus and one of Dermatitis Autophyta.

Dr. JOHN D. COMRIE exhibited a case of Spastic Paraplegia in a female child aged 7 years. The legs were fairly developed, but she could only walk when supported, and did so with her legs crossed. The arms were strong, the visceral functions were normal, and the intelligence was good. Wassermann's reaction proved negative. Probably the paraplegia was due to a congenital defect in the brain at the upper end of each Rolandic area (porencephaly).

Dr. ROBERT A. FLEMING showed two cases of Beri-beri which had occurred in a fireman and a lascar in the same vessel. The first case was of the wet type, and the history had extended for three weeks. The disease commenced with weakness, pains in the chest, and later these were complained of all over the body. The leg-jerks were completely lost, and there were extensive areas of anæsthesia not confined to the legs. No hyperæsthesia was present, except a slight muscle tenderness, especially in the calf muscles. Dropsy of the legs and feet ensued, but this had now passed off. The left ventricle of the heart was dilated, but there was no irregularity. The second case was of the dry type. The duration was the same as in the preceding case. The patient had complained of much pain in the stomach and head. The loss of leg-jerks and areas of anæsthesia were very similar to the other case, though there was rather more hyperæsthesia of the muscles of the calves. There had not been any dropsy, and there was much less evidence of dilatation of the left ventricle. Both men had been fed in part on rice water, and there were other but less definite cases amongst members of the crew at the same time.

Dr. EDWIN BRAMWELL showed two cases for diagnosis. Two brothers, aged 17 and 11 years, had for four years and one year respectively been troubled with progressive difficulty in walking. There were no similar affections in other members of the family or in their antecedents as far as could be ascertained. Both patients presented a degree of spastic paraplegia with exaggerated tendon jerks and a bilateral tendon response, in addition to some unsteadiness of gait, an intention tremor in the upper limbs, and defective articulation.

Dr. G. LOVELL GULLAND showed four cases of Aneurysm.

Mr. JOHN FRASER showed Transplantation of Fibula to Replace an Undeveloped Tibia in a child aged 6 months.

The lower half of the right tibia was undeveloped, and the growing fibula had displaced the foot inwards at a right angle. The fibula was divided, a portion was removed to permit of straightening, and the ends wired. Into the gap of the undeveloped tibia the fibula of the opposite leg was transplanted.

Mr. LEWIS BEESLY showed a male patient after Left Interscapulo-thoracic Amputation for Tuberculous Disease with Sinuses. The man had received an injury to his shoulder in 1905; pain commenced to be felt in the shoulder two months later; an abscess burst in 1909. A radiogram showed tuberculous disease of the shoulder-joint which was excised by the anterior method. The wound healed, and he had a useful arm for two years; recurrence then took place with fresh abscesses and amputation was performed this year. The wound had healed completely.

Mr. DAVID WALLACE exhibited: 1. Diastasis of the Lower End of the Femur after Plating. The patient, a boy aged 12 years, was thrown from a horse-rake and had his left leg caught and severely twisted. On admission to the infirmary the lower end of the shaft of the femur was situated just under the skin on the inner side of the leg and the epiphysis was displaced forwards and outwards. Replacement under an anæsthetic was unsuccessful, and therefore after extension had also failed plating was done on the eighteenth day after the injury and the union was now satisfactory and complete. 2. Partial Resection of the Stomach for Carcinoma. The patient was a man, 46 years of age, who was admitted on Oct. 16th, 1913. He had been treated medically for six weeks during August and September for symptoms indicating duodenal ulcer. During this time he had gained weight, but on returning home had recurrence of hæmatemesis and gastric pain. No tumour was palpable. A year previously he had suffered from exophthalmic goitre, but there was no evidence of this disease on his admission to the surgical wards. On Oct. 24th the middle section of his stomach was excised for a carcinoma on the anterior wall and the two portions were reunited. An enlarged inflammatory gland below the stomach was also removed. The man had made an excellent recovery.

Mr. D. P. D. WILKIE showed a case of Osteo-chondritis Deformans Juvenilis in a boy aged 8 years. For the past four months he had been limping, the limp becoming gradually more pronounced. He had no pain, but ran about and played football with his companions. Movements of the affected hip-joint were free except abduction, which was markedly restricted. An X ray photograph showed the typical appearances—viz., flattening of the epiphysis and rarefaction at the outer and upper part of the neck of the femur.

Mr. J. W. DOWDEN showed: 1. A male aged 49 years. He had fractured both bones of the right leg on May 28th; the shortening amounted to 2 inches. The case was treated by hanging the leg over the end of the bed; no splints were applied. Marked œdema resulted, and though union was delayed the position of the bones and the length of the limb were good. 2. A female, aged 50 years, who had fractured both bones of the leg; the shortening amounted to 1½ in. On the third day after the accident treatment was begun as in the preceding case. Rapid union took place with the bones in excellent position.

Mr. GEORGE L. CHIENE showed: 1. Carcinoma of the Sigmoid Flexure which caused complete obstruction for 14 days. The patient was a female aged 35 years. She had vomited for a week. On admission the abdomen was distended and the intestines showed the ladder pattern. A transverse incision was made and the cause having been ascertained colostomy was performed, and 12 days later the growth was resected. One month after the first operation the colostomy was closed. 2. Large Ventral Hernia of old standing in a woman aged 42 years. There were recent signs of subacute obstruction with pain and tenderness localised to one portion of the hernial tumour. At the operation the urgent symptoms were found to be caused by strangulation of an epiploic appendix in a subsidiary peritoneal pouch.

Mr. J. W. STRUTHERS showed: 1. Ostitis Fibrosa occurring in a male aged 21 years, causing deformities, specially in the femora. 2. Osteoplastic craniotomy for Jacksonian Epilepsy in a boy aged 9 years and 7 months. At the time of operation the patient was having 16 to 18 fits in 24 hours. Nothing abnormal was found at the operation, which exposed the upper right motor area, but since the operation the boy has been entirely free from seizures.

Mr. CHARLES N. CATHCART showed: 1. A man after operation for Tuberculous Glands of the Neck where the internal jugular vein was torn close to the skull and closed by plugging. 2. A male patient finally cured after six operations for Recurrent Fibroid Tumours of the Neck and Face. He had since developed a carcinoma of the splenic flexure of the colon.

## EDINBURGH OBSTETRICAL SOCIETY.

*The National Insurance Act and Obstetrics.—Cloacal Vesical Exstrophy in the Female.*

A MEETING of this society was held on Nov. 12th, Dr. J. HAIG FERGUSON, the President, being in the chair.

The PRESIDENT in his valedictory address referred to the effect that the Insurance Act had had on the teaching of obstetrics and on maternity hospitals in Scotland. There had, he said, been a large decrease in the number of cases in the different maternity hospitals in Scotland. From Jan. 1st to August 31st of this year there had been a decrease in indoor and outdoor practice in Glasgow Maternity of 717 cases; Aberdeen, 145; Edinburgh, 381; and a considerable number in Dundee, though statistics for this similar period were not available. The field of teaching was undoubtedly restricted, the output of nurses was consequently less, and the difficulties of meeting even the bare obstetric necessities of the medical student were correspondingly increased. There was a necessity for midwives, especially in rural dtstricts, but they must be efficiently supervised. For this purpose the Scottish Midwives Bill was required, and it was hoped that this measure might soon be enacted. He also referred to the deaths during the last year of several honorary Fellows—Mr. G. Granville Bantock, Professor H. J. Garrigues, Professor Paul Segond, Professor Sir W. Japp Sinclair, and of several corresponding and ordinary Fellows.

Dr. T. B. JOHNSTON communicated a paper by Dr. A. A. MORISON on a case of Cloacal Vesical Exstrophy in the Female. The case occurred in the out-patient practice of the Edinburgh Royal Maternity Hospital. The mother had given birth to eight other children, none being deformed. During her pregnancy she had fallen on the floor several times, but did not take much notice of these falls as she never hurt herself severely. There was nothing specially noted with regard to the placenta, membranes, or liquor amnii. The child was weakly and only survived birth three days. During life it took the bottle fairly well and cried feebly at times. When it cried the extroverted area became prominent, and a proboscis-like protrusion in the extroverted area straightened out and normal meconium was extruded. The urine issued from a small opening placed on the inferior aspect of the area to the right of the middle line. There was no anal opening, but a slight depression was present. The extroverted area was somewhat triangular in shape, the apex of the triangle being below the attachment of the cord. The centre of the area was prominent and cone-shaped, the apex terminating in a proboscis-like structure curving to the right, from which meconium escaped. The upper part blended with the skin of the abdominal wall. On the inferior surface there was an evagination surface depression, at the side of which was a slit-like orifice which was found later to communicate with the large intestine. On post-mortem examination it was found that the intestine measured 30 inches from the pylorus to its termination in the centre of the extroverted area. The large intestine was represented by a small oval body, yellowish in colour, with a recurved blind extremity; it was found in the centre of the pelvic cavity. There was a double vagina, the walls of which were joined in the lower half. A portion of large intestine crossed the junction. The right vagina was the larger and was seen connected with a partially developed uterus with normal broad ligament, Fallopian tube, and ovary. The left vagina had a very rudimentary uterus attached, but the appendages seemed normal. The right vagina communicated with the surface on the extroverted area by a small opening. There was no communication between the two vaginæ. The right ureter opened into the right vagina. The lower end of the left ureter was attached to the left vagina on its posterior surface,

but did not open into it; it was irregularly dilated and there was secondary hydronephrosis. The symphysis pubis was absent, the iliac and portion of pubic bones being widely separate anteriorly; there was no spina bifida. Microscopically the greater part of the extroverted area was covered by normal bladder epithelium of squamous character; there was a portion near the prolapsed end of small intestine covered by normal intestinal mucous membrane. With regard to the origin of this arrest of development of the anterior wall, it is to be noted that there was an absence of attachment of fœtal membranes to the area, and that there was no spina bifida. These are two of the most common causes given for this condition. Dr. Johnston had worked up the histology of the specimen.

Dr. D. BERRY HART thought no one would consider the falls of the mother as a cause for the extroversion. Professor Wood thought such a condition was due to an adhesion of the placenta and membranes, but no one had confirmed this. Professor Paterson had also given a somewhat similar explanation. The allantois was blamed also as the cause—an extraordinary view. The human embryo had no allantois; all that it had was a small tube in the early umbilical cord, and consequently it could play no part whatever in this deformity. In this case the real explanation had been given by Dr. Johnston—namely, that the extroversion was due to the yielding of the cloacal membrane, which was the membrane in early fœtal life lying in front of the entodermal cloaca and in the middle line. The gut was formed by an infolding of the blastoderm, and the bladder and rectum were formed by coronal folds. In the middle line there was thus a weak part where the mesoderm was wanting from the first or failed to grow in, and it was the yielding of this mesodermic portion that caused the extroversion of the bladder. The difficult point was to explain exactly the openings into the small intestine. It was quite possible that the part of the gut in front of which the extroversion arises plays some part in the formation of the small intestine.

Dr. JOHNSTON, in reply, said that the chief difficulty in the previous cases was that investigators had been drawn away by the opinion that the extroversion of the bladder necessitated rupture of the viscera, and they worked from that standpoint.

The following Fellows were elected office-bearers for the ensuing session:—President: Professor Sir J. Halliday Croom. Vice-Presidents: Dr. G. F. Barbour Simpson and Dr. G. Keppie Paterson. Treasurer: Dr. John McGibbon. Secretaries: Mr. E. W. Scott Carmichael and Dr. R. W. Johnstone. Librarian: Dr. J. Lamond Lackie. Editor of Transactions: Dr. James Young. Members of Council: Professor R. G. McKerron (Aberdeen), Dr. J. W. Keay, Dr. H. Oliphant Nicholson, Dr. H. M. Church, Dr. J. Haig Ferguson, Dr. Angus Macdonald, Dr. D. Berry Hart, and Dr. Hugh S. Davidson.

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DEVON AND EXETER MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 14th, Dr. C. J. Vlieland, the President, being in the chair.—A unanimous vote of condolence was sent to the relatives of the late Mr. J. Somer, the greatly esteemed father of the society.—Mr. George Adkins introduced a discussion on "Milk and Milk-supply." He said that to get a grasp of this subject from a public health point of view a milk-supply must be studied in all its sources. Commencing with the cow, at least 30 per cent. were found to suffer from tuberculosis, and at least 10 per cent. of these could convey the disease. As the milk left the cow contamination often took place at once through the very act of milking. Teats and udders were frequently soiled with cow-dung. Again, those engaged in milking often came to the cows straight from such employment as digging manure, and no attempt was made to cleanse the hands. He had seen a milker dip his hand into the pail and use some of the milk as a lubricant to the teat, and from the latter there streamed down to the pail again an emulsion of milky cow-dung. Dairies which looked very clean and beautiful inside frequently ventilated in the direction of a neighbouring dunghill, while the water for scalding cream was liable to be derived from an uncertain source. Again, the conveyance of milk offered an easy opening for contamination, while even if milk escaped in the earlier sources of supply grave risk was encountered in the home owing to dirty jugs, defective larder, and contamination by flies. Mr. Adkins then dealt with the spread of epidemic disease *viâ* the milk-supply. Greater attention should be directed to the cleansing of cows and sheds and to the need for cleaner methods in milking. He advocated the immediate cooling of milk from the moment it left the cow. He then criticised the administration of the so-called prevention of adulteration Acts which were carried out feebly by the police at expected and stated intervals. Many useful Orders emanating from time to time from the Local Government Board had not been adopted by the district sanitary authorities.—Dr. Henry Davy considered that the frequency of infection by B. coli group was not sufficiently recognised, nor how easily such an introduction could take place under the present filthy conditions of milking. In the matter of tuberculous disease any satisfactory scheme for dealing with the cows would have the effect of raising the price of milk and make it impossible for the poor to obtain it in sufficient quantity. He considered that the proposed Pure Milk Bill would be too unpopular for any Government to bring it forward.—Dr. William Gordon considered it was extraordinary that such vile methods of milk-supply should exist in this country. He stated that in Denmark tuberculosis had almost been stamped out and asked why it should not be so in this country. He therefore advocated the support of any means for the furtherance of a drastic Bill.—Mr. Russell Coombe mentioned an experimental farm of 100 cows where the milk was examined constantly at the Lister Institute for 12 months. The bacillary content had been much reduced when the closed pail superseded the open, and still more reduction was obtained when methods of cooling were introduced. He discussed the various items and the expenditure involved in a certified milk-supply. He considered that too harsh restrictions on the producer would work against grazing and the supply of milk might be reduced to a dangerous point. For this reason he advocated a certified milk-supply.—Dr. R. V. Solly considered that since milk formed such an excellent medium for cultivation the art of milking should be undertaken with the same thoroughness as a surgical operation. The temperature of the milk should be reduced to 10° C. He then enumerated the various organisms capable of gaining an entry to milk and mentioned that in infantile diarrhœa the products of bacteria were often of as much importance as the organisms themselves. He considered that milk heated to 60° C. in a closed vessel for 20 minutes became sterile as regards micro-organisms.—Dr. C. N. Lovely referred to the Copenhagen milk-supply, for which private enterprise had done most. The companies paid 4 per cent. and the price of milk was not raised.—Dr. Black thought that recent legislation had been productive of good. Cleanliness could only be insured amongst milkers by an appeal to the owners. In advocating suitable covers for the protection of stored milk, he mentioned that he had seen an admirable contrivance in one dairy which was merely a square of muslin with small weights at the corners. Fine flexible metal might be substituted for the muslin which was liable to become soiled.—Mr. E. L. Sturdee considered that the old cowsheds, so frequently encountered on inspection, were very difficult to maintain in anything approaching a cleanly condition. Education was required by the consumers as well as by the dairyman and farmer. In Exmouth they had recently adopted the bacteriological examination of milk.—Dr. H. E. Goulden had found more uncleanliness of the teats than of the milkers' hands. He strongly advocated the initial cooling of milk.—At the conclusion of the discussion a resolution was unanimously adopted affirming the desirability of the Government proceeding without delay to introduce the long promised Milk Bill, in view of the steps now being taken in regard to tuberculosis and infantile mortality. Pending the introduction of the Government Milk Bill this meeting expressed the opinion that the Exeter city council should take under their consideration the examination of milk for the detection of tubercle.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 6th, Dr. Walter Broadbent being in the chair.—Sir Anthony Bowlby gave an address on the Character and Site of Abdominal Pain, and their Relation to Diagnosis. He pointed out that attacks of acute, transient, and recurrent abdominal pain, apart from neuroses, diseases of the spinal cord, or poisons, were due (*a*) to obstruction or distension of a viscus, (*b*) to interference with its circulation, or (*c*) to extension of

inflammation to the peritoneal coat. He emphasised the value of an exact, detailed statement of one particular attack, its mode of onset, immediate effect, and subsequent symptoms, and especially the finding out whether tenderness remained at any point after the acute attack was over, because pain was frequently referred to points distant from the viscus affected, but persistent local tenderness was a true guide. He noted that the position and lines of radiation of pain were often important, affections of the gall-bladder, for instance, being the only abdominal condition causing anterior chest pains even up to the shoulder, catching of breath, &c., though in this connexion care should be taken not to exclude because of absence of pain, for it was the passage, not the presence, of gall-stones that caused the pain, and many patients were treated for years for indigestion, &c., while all the time the gall-bladder was full of stones, simply because they never had suffered from colic or jaundice. He added that in only 1 case in 5 of renal colic was there a stone present, and conversely that cases with stone present did not suffer from colic, the explanation being that attacks of colic were mostly due to a "storm of crystals" passing down the ureter, while stones lying in the pelvis of the kidney were painless. A case in which the passage of a stone down the ureter occupying three years was watched by X rays, and was unattended by any pain or symptoms, was here referred to. In the case of the appendix he pointed out that pain was more generally referred to the umbilicus or some distant part if the peritoneal coat were not affected. The small intestine being entirely intraperitoneal, while the large intestine was not, explained why with the large intestine pain was more definitely located in the site of disease. He concluded by referring to neurotic cases with severe abdominal pains but no organic lesions. In many instances operations were demanded injudiciously and were unsuccessfully performed. —The paper was discussed by Dr. Broadbent, Dr. A. H. Buck (who thought that "splanchnic neurasthenics" generally had real organic lesions), Dr. J. F. Gordon Dill, Dr. R. Whittington, and Mr. H. N. Fletcher (who gave an interesting account of the exact position of referred pain in relation to the distribution of the spinal nerves).

LONDON DERMATOLOGICAL SOCIETY.—A meeting of this society was held at St. John's Hospital, Leicester-square, W., on Nov. 18th, Dr. Morgan Dockrell, the President, being in the chair.—Clinical cases were shown as follows: Dr. J. L. Bunch: (1) A case of Tuberculosis Verrucosa Cutis in a woman aged 54; and (2) a case of Macular Syphilis in a man who gave no history of primary infection.—The President showed a case of Hyaline Degeneration of the Skin in a woman aged 35; the condition had been present since childhood, and took the form of hard pearl-like nodules; the disease was especially marked on the bridge of the nose and the upper and lower eyelids. 2. A case of Xeroderma Pigmentosum in a girl aged 16; some of the lesions showed a warty growth, with telangiectasis and scarring.—Dr. T. Galbraith showed two cases of Lupus Vulgaris which had been treated for one year with tuberculin—P.T.O., P.T., and T. One case showed considerable improvement, while in the other case there was no improvement.—Dr. W. K. Sibley showed: 1. A case of Lupus Erythematosus in a man aged 34, symmetrical, and spread over the face and ears. 2. A case of Lupus Erythematosus which had been treated for one month with Acetone $CO_2$; most of the eruption had entirely disappeared. 3. A case of Tuberculosis Verrucosa Cutis in a butcher's assistant aged 34. The lesions were situated on the back of the left hand. —Dr. W. Griffith showed several cases of Lupus Vulgaris, ulcerated and non-ulcerated types, and described the treatment in each case.—Dr. Griffith also read a paper on Chronic Lupus, in which he discussed the treatment by Volkmann's spoon, and X rays especially in the ulcerative type of lupus, also Finsen light, and tuberculin treatment.—The President, Dr. Sibley, Dr. A. T. Bremner, and Mr. E. U. Bartholomew joined in the discussion, and Dr. Griffith replied.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY.—A meeting of this society was held in the Board-room of the Great Northern Central Hospital on Nov. 13th, Dr. T. Wilson Parry, the President, being in the chair.—Mr. G. B. Mower White showed a case of Carcinoma of the Tongue after operation. The particular point of interest in this case was the large size of the tumour; it had been growing for four years, the first two of which the patient had had regular anti-specific treatment; the last two this treatment was carried out intermittently. The whole tongue had been removed, and the patient spoke as well as, if not better than, he did before the operation.—Cases were also shown, with skiagrams before and after operation, by Mr. White of a Plated Fracture of the Femur after faulty union had taken place of three months' standing. The faulty union was due to the fracture being comminuted, and a large fragment prevented the ends of the bone from coming into correct contact. Also a wired recent Fracture of the Humerus, the ends of the bone not being able to be placed in apposition owing to the jagged nature of the fracture. It had been put up on a Middledorf's splint and excellent union had resulted.—Mr. Arthur Edmunds showed a case of hypospadias illustrating the second phase of this special operation for this congenital deformity. The operation had already been described in THE LANCET of Feb. 15th last.—Mr. Cecil Rowntree showed a specimen of Angioma of the Breast. This was described as an exceedingly rare disease in that region, Dr. Ernest H. Shaw stating it was the first case of the kind he had seen.—Mr. A. Clifford Morson showed sections illustrating the Effects of Radium on Malignant Cells. This created much interest, and a brief discussion ensued as to the real value of radium on malignant cells.—Dr. C. M. Hinds Howell exhibited two cases of Obscure Nervous Origin requiring a diagnosis, and Dr. E. Bellingham Smith showed a case of Tabes and Double Charcot Shoulder, one of which was dislocated.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 19th, Mr. R. G. Hogarth, the President, being in the chair.—Dr. F. H. Jacob gave an address on Vaccines and Tuberculins. He explained the processes of natural immunity, and how dead cultures of bacteria produced antibacterial substances similar to those produced by living cultures. Wright's discoveries of negative and positive phases had paved the way to the administration of vaccines in cases of infective diseases. The general principles of vaccine treatment in various diseases were illustrated. Now that opsonic indices had been thoroughly tested in the various diseases, one was more able to rely on clinical guides as to dosage and the interval between each dose. If the dose was a proper one it should be followed by a negative phase in which the focal symptoms of the disease were increased for from 24 to 48 hours. Subsequent to this there should be a marked improvement in all the focal symptoms—i.e., there should be a sustained positive phase. After an interval of 7 to 10 days an increased dose should be administered. In acute diseases the initial dose should be small and should be followed by a second dose after three or four days. In vaccine treatment the best results were in cases of boils. B. coli vaccine together with urotropine in pyelo-nephritis gave good results. His results in pneumonia were not so good. Dr. Jacob was convinced that tuberculin had caused the death of many patients by lighting up the disease. For diagnostic purposes the dose should be very small. He had found T.R. the safest. Provided adjuvant treatment was also carried out, he was convinced that tuberculin undoubtedly did good in some special chronic cases where the treatment was persevered with for at least a year.—The discussion was continued by the President, Dr. C. H. Cattle, Dr. W. T. Rowe, Dr. J. S. Bolton, Dr. B. R. B. Truman, and Dr. J. Watson.

UNITED SERVICES MEDICAL SOCIETY.—At a meeting of the above society held at the Royal Naval Medical School, Greenwich, on Nov. 13th, Colonel Bruce M. Skinner, M.V.O., A.M.S., the President, being in the chair, a paper was read by Surgeon Campbell Ross, R.N., on Pulmonary Tuberculosis in the Royal Navy. He pointed out that the disease was not an uncommon one in the Navy. The number of invalidings for this disease in 1911 were 2·02 per 1000; the number of cases is, however, showing a yearly decrease; in the years 1856 to 1860 the average annual invalidings were 5·4 per 1000. He dealt at length with the causes, prevention, diagnosis, and treatment of the disease in the Navy, and pointed out the importance of efficient ventilation, the early diagnosis of cases, and the invaliding out of the service of men affected with pulmonary tubercle. (This is a routine procedure in the Royal Navy.) He also pointed out the importance of careful examination of the

chests of recruits at entry. He gave a description of tuberculin treatment as carried out at the Royal Naval Hospital, Chatham, which in suitable cases had been found to give excellent results.—An interesting discussion followed, in which the following officers took part: Surgeon-General Sir James Porter, R.N. (retired), the President, Fleet-Surgeon P. Bassett-Smith, R.N., Fleet-Surgeon A. Gaskell, R.N., Lieutenant-Colonel C. Birt, R.A.M.C., and Surgeon R. Connell, R.N.—The passing of a hearty vote of thanks, proposed by the President, to Surgeon Ross for his most complete and valuable paper concluded the proceedings.

ÆSCULAPIAN SOCIETY.—A meeting of this society was held on Nov. 21st, Dr. David Ross, the President, being in the chair.—Dr. Leonard Williams showed a boy, aged 16, who had ascites due to Tuberculous Peritonitis of four weeks' standing on admission. He was treated with calcium chloride and made a good recovery. The abdomen decreased from 52·3 cm. to 43·3 cm.—Dr. P. Hamill showed: (1) A woman the subject of Acromegaly with deep voice, typical facies and hands; also a skiagram of the skull and hands; (2) a man, aged 23, with Enlarged Upper Jaw, who may be the subject of acromegaly.—Mr. P. Maynard Heath: (1) A baby, six weeks old, who had a Congenital Angioma under the right hallux not involving the skin; (2) a boy, six years old, who had the sternal end of the clavicle dislocated forwards by the wheel of a van passing over the shoulder without fracturing anything. Fixation of the arm had not prevented the continuance of the luxation.

# Reviews and Notices of Books.

*The State Provision of Sanatoriums.*

By S. V. PEARSON, M.D. Cantab., M.R.C.P. Lond. Cambridge: at the University Press. 1913. Pp. 80. Price 3*s*.

THE problem of the control and prevention of tuberculosis is ever before us, and the literature on the subject is growing apace. Nevertheless, in spite of all attempts to consolidate the efforts being made to solve the problem, chaos still persists. Some observers still maintain that the sanatorium is the essential element in treatment—prophylactic and curative; others, that tuberculin is the only rational remedy that can be employed; others that the dispensary, in its capacity of a remedial and educational centre, is the institution absolutely necessary for the success of any measures that may be taken against the disease. The truth will probably be found in a judicious combination of these methods; reliance on one alone will, we consider, lead to failure.

Dr. Pearson is an enthusiastic believer in the value of the sanatorium, and in the work now before us he sets forth his views as to the State provision of sanatoriums. He gives a short outline of what various countries are doing in a similar direction, and advocates the principle that tuberculosis should be treated separately when any scheme of sickness benefit or State insurance against sickness comes to be considered.

In the chapter on How to Raise the Funds and Control the Efficiency of State Sanatoriums various suggestions are made as to how the necessary expenditure might be met. The author mentions five sources, one or more of which might be drawn upon: (1) Voluntary charitable contributions from private individuals, generally the wealthy; (2) direct contributions from employers of labour to ensure the better efficiency of their employees; (3) local rates; (4) the pooled contributions of the working classes through invalidity and sickness societies or other agencies; or (5) taxes—through the National Exchequer. He comments on these sources, but does not advance matters much further by argument, recognising, no doubt, the difficulties. He then proceeds to show that the history of the gradual adoption by civilised states of the State provision of relief for the destitute and for the sick exhibits certain well-defined tendencies, of which perhaps the most promising is the recognition of the advisability of having, for purposes of economy and efficiency, an overseeing central authority with adequate powers of inspection and control over the local authorities, who, as a rule, have originally had the sole responsibility of looking after the destitute and sick.

In discussing the management of a sanatorium Dr. Pearson says that when large numbers of patients are being arranged for and economy demands a good deal of grouping, probably the best plan is to have two slightly different classes of sanatoriums. One should be within reach of populated centres, with a somewhat larger staff of nurses, ward-men, or ward-maids, and so on, than the other type possesses; to this all patients should at first be sent. The other, situated in the more remote country, is to be utilised by drafting those convalescents into it who are able to take plentiful exercise or graduated labour. While agreeing with this plan, we doubt whether it is wise that both these institutions should be called sanatoriums; the first class of institution he mentions partakes of the character of a hospital, whilst the second is more what a sanatorium ought to be.

Dr. Pearson's observations are valuable as suggestions rather than as an answer to the great problem at issue; but he has collected together a number of useful facts and has based upon them certain proposals which are worthy of consideration.

*Preventive Medicine and Hygiene.*

By MILTON J. ROSENAU, Professor of Preventive Medicine and Hygiene, Harvard; formerly Director of the Hygienic Laboratory, U.S. Public Health Service. London and New York: D. Appleton and Co. 1913. Pp. 1074, with numerous illustrations. Price 25*s*. net.

Professor Rosenau has planned this work on broad lines, with a catholic appreciation of the subjects which form the foundation of scientific public health work, and of the necessity of exact knowledge in fundamentals, if preventive medicine is to be written about and practised in the way most conducive to learning and practical progress. His personal experience in epidemiological investigations in America and in public health laboratories in different parts of the world, as well as the industry with which he has collected and studied the work of others, would in any case give importance to his presentment of modern preventive medicine, and no reader of this volume can fail to appreciate the ability and sound judgment with which the task has been carried out.

The order of the book illustrates the enlargement which has for some time been taking place in the conception of preventive medicine. Questions of "environmental" hygiene, especially the sanitary requirements of communities as represented by public works and local administration, are at least as important and necessary as they always have been, and remarkable progress is being made year by year in their efficiency. But they are, in the present stage of sanitary science, being overshadowed by the progress made in detecting the

methods of transmission of disease, and in devising means for protecting the healthy individual from the particular infections or for destroying living carriers of infection. Professor Rosenau's book plunges the reader at once into the prevention of communicable diseases—a subject which occupies the first third of the volume; the following and a most valuable section deals with immunity, heredity, and eugenics; while the remaining half of the work comprises chapters on foods, air, soil, water, sewage and refuse disposal; industrial hygiene; vital statistics, and hygiene of schools. This latter part, it should be said, gives evidence of much care in preparation and a considerable knowledge of practical sanitary work in this country and on the continent, as well as of the United States methods, which naturally supply the principal text. The chapter on sewage disposal has been contributed by Professor Whipple, of Harvard, and that on vital statistics by Mr. C. L. Wilbur, the chief statistician of the U.S. Census Bureau.

Reverting to the first part of the volume, it will be found that Professor Rosenau has conveniently classified communicable diseases into (1) those having specific or special prophylactic measures—small-pox, rabies, venereal diseases, preventable blindness, and tetanus; (2) those spread largely through alvine discharges; (3) those spread largely through discharges from the mouth and nose; (4) insect-borne diseases; and finally (5) miscellaneous diseases, as yet not classified. The chapter on the latter includes a useful treatise by Dr. Thomas Salmon on mental diseases. A perusal of any of these accounts of different diseases will show that Professor Rosenau has taken great pains to set out all salient facts and to form a well-balanced judgment of the various causes which affect the prevalence of each disease and the relative importance of different means of prophylaxis. This is well illustrated by the chapters on tuberculosis, in concluding which the author points out that its prevention is now less a medical than a sociological problem. The results of the enthusiastic attack on tuberculosis are encouraging, but its eradication, in the author's opinion, must take a long time. "We should be satisfied," he says with useful moderation, "if we diminish the amount of tuberculosis appreciably in a generation. The momentum thus gained will increase rapidly. The time will come when the comparatively few cases left may be treated by compulsory isolation or other aggressive measures. Persistence along the lines now understood will in time control the disease, which will be the crowning achievement in preventive medicine." The observations on the prevention of small-pox and the value of vaccination show similar breadth, though their value would be increased for English readers if the author had drawn upon the data afforded by English small-pox hospitals, both in regard to vaccination and their effect in spreading the disease when they have been situated in populous neighbourhoods. Carrier infection in typhoid fever is fully described, but care is taken to emphasise the necessity of giving first attention to removing conditions in which either a typhoid patient or a typhoid carrier could cause an epidemic by wholesale infection of water or food. The prevention of syphilis is fully discussed, partly as a matter of early treatment of the individual case and partly from the standpoints of personal prophylaxis and continence. This subject may be expected in future to take a more prominent place in text-books of hygiene than is at present the case.

In conclusion, we may congratulate Professor Rosenau on an admirable piece of work, which is sure to receive careful attention from hygienists in this country.

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*Treatment by Hypnotism and Suggestion, or Psychotherapeutics.*

By C. LLOYD TUCKEY, M.D. Aberd., First President of the Psycho-Medical Society. Sixth edition, revised and enlarged. London: Baillière, Tindall, and Cox. 1913. Pp. 431. Price 10*s.* 6*d.* net.

THE fifth edition of this book was reviewed at length in THE LANCET of August 10th, 1907, p. 372, and we then took occasion to commend its lucid and pleasant style, its scientific and careful character, and the candour and adherence to fact which are characteristic of the genuine searcher after truth. There are considerable additions, particularly in Chapter VII., which deals with the sphere of action of hypnotic treatment. The chapter still breaks the continuity of the theme of Chapters VI., VIII., and IX., which are concerned with the scientific explanation of hypnotism, instead of being transposed so as either to precede or to follow them. We are glad to note that the author now relies on his own experience only in the chapter of illustrative cases—which are not, however, greatly increased in number—and has omitted the recital of cases reported by other medical men. There is also a new note in the appendix on Spiritual and Mental Healing, and reference is made to the "Emmanuel method" in America.

Dr. Constance Long contributes a chapter on Professor Freud's Theories and Treatment by Psycho-analysis, which is intended to serve merely as an introduction for the uninitiated; for, as she observes, it is no easy task to give a true picture of Freud's psychology and psychotherapy in a short essay, partly because much of it is still in a fluid state.

The book still suffers from the very annoying defect to which we called attention in reviewing the previous edition—viz., the absence of page headlines descriptive of the subject matter of the chapters. The monotonous repetition of the title of the book at the top of every page is as irritating to those in search of a particular subject as it is entirely devoid of utility. Far better dispense with a headline altogether.

The book is an excellent introduction to the study of hypnotism.

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*Die Untersuchung der Nieren und der Harnwege mit X Strahlen.*

Von Dr. BELA ALEXANDER. Berlin: Oscar Coblentz. Pp. 59. Price 16 marks.

THIS volume is a monograph on the radiography of the kidneys and urinary tract, and is mainly devoted to discussions of cases illustrated in over 40 large plates, which are the chief feature of the work, and are models of clearness and accuracy. Only one, however, is an actual reproduction of the original plate, or "positive" as the author insists that it shall be called, the others being mostly outline sketches reduced to two-thirds.

The book begins with a historical sketch of the evolution of the radiography of the kidneys from the first demonstration in 1896 of a stone by Macintyre, who used a Roentgen tube without accessories—undoubtedly the ideal procedure, but

inapplicable in many cases. In 1897 Garrigou exhibited to the Paris Academy his so-called "condenser," which gave more detail in the plates and reduced the time of exposure. This was the precursor of the compression cylinder of Albers-Schönberg, of which the author uses Rosenthal's modification. We learn that the longest exposure employed is 10 seconds, but the author gives hardly any details of his technique, an unfortunate fact, as its excellence is abundantly shown in the plates, some of which exhibit details not often seen—e.g., the outlines of the spleen and suprarenal capsules.

Much stress is rightly laid on the importance of aiming at a representation of the actual kidney on the plate, but the author is not satisfied with merely an outline, but in favourable cases succeeds in obtaining a perspective or "plastic" effect that is certainly very remarkable. Fig. IV. shows such delicate shading that the kidney seems to stand out as a solid body, and the clearness of its relation to other structures, especially bones, almost reminds one of a dissection. A good plate should show the kidney, its size, contour, and position, the vertebral column, and two lowest ribs, the psoas and quadratus lumborum. These structures are portrayed in their natural size, as measurements of kidneys and calculi removed by operation have proved.

After a description of the normal appearances a series of plates is devoted to renal and ureteric calculi, and tubercle of the kidney, while conditions that may cause erroneous diagnoses are also shown —e.g., calcification of the cartilage at the tip of the twelfth rib. One plate shows several calcified nodules which are diagnosed as being situated not in the kidneys but in the perinephric fat. Lastly, a chapter is devoted to the radiography of the lower urinary tract with several illustrative cases worked out in detail with characteristic thoroughness.

The volume will be found most useful as an atlas of urinary radiography.

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*Trachoma and its Complications in Egypt.*

By A. F. MACCALLAN, M.D. Cantab., F.R.C.S. Eng., Director of Ophthalmic Hospitals, Egypt. Cambridge: at the University Press. 1913. Pp. 74. Price 7*s.* 6*d.* net.

No one is better qualified than the Director of the Egyptian Ophthalmic Hospitals to instruct us on trachoma and its management. He has been indefatigable in his efforts to cope with this devastating disease where it is most rife, and he has brought to the work just those qualities which are most essential, though seldom combined in the same individual. With a thorough knowledge of ophthalmology and a sound judgment he combines exceptional administrative ability, and his efforts are being crowned with the success they deserve.

The book is founded upon the experience of more than eight years in Egypt. There will soon be 14 hospitals under the director's control, besides a number of travelling hospitals. During the year 1912, 341,211 attendances at the various hospitals were made by 28,029 patients, and 21,315 operations were performed. It is no exaggeration to say that nearly if not quite all these patients suffered from trachoma.

Dr. MacCallan reviews the history, climatic and racial variations, mode of infection, clinical features, and pathology of the disease. He has introduced a very useful classification of its stages: I., Incipient; II.*a*, follicular; II.*b*, follicular associated with papillary hypertrophy; III., early cicatricial; and IV., completely cicatrised. Stress is laid upon the varieties of acute conjunctivitis complicating trachoma. We read nothing of "acute trachoma," and our opinion, founded upon smaller experience, that the cases thus described are really ordinary trachoma complicated by an acute conjunctivitis, is confirmed. Part III. is devoted to treatment, and should be carefully studied by all who have to deal with these troublesome cases. In Part IV. the differential diagnosis, prognosis, influence of trachoma on ophthalmic operations, prophylaxis, causes of blindness in Egypt, and statistics are discussed.

Within the limits of 70 pages Dr. MacCallan has given us the quintessence of the subject, and we congratulate him upon the result.

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*Maladies du Cou.*

Par JOSEPH ARROU, PIERRE FREDET, et ERNEST DESMAREST, Chirurgiens des Hôpitaux de Paris. Avec 41 figures dans le text. Paris: J. B. Baillière et Fils. 1913. Pp. 166. Price, paper, 4 francs; bound, 5.50 francs.

THIS is a section of the large and important "System of Surgery," edited by Professor Le Dentu and Professor Delbet. It is written with the thoroughness which has characterised all the parts of the work hitherto published. Injuries of the neck, abscesses, and inflammations are considered in turn. The subject of enlarged glands is treated fully, and the authors draw attention to the disproportion which often exists between the small size of a malignant growth of the pharynx or œsophagus and the great enlargement of the corresponding glands. They also point out how often the supraclavicular glands are enlarged in malignant disease of such distant organs as the kidney, ovary, and testis; but the stomach and uterus are far more frequently the sites of the primary growth than are the other organs mentioned. An interesting section is that devoted to the study of the congenital cysts of the neck and the tumours arising from them. The volume contains also a chapter on torticollis.

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*Fortschritte der Naturwissenschaftlichen Forschung*

Herausgegeben von Professor Dr. EMIL ABDERHALDEN, Direktor des Physiologischen Institutes der Universität Halle a.S. IX. Band. Mit 102 Textabbildungen und 2 Tafeln. Berlin und Wien: Urban und Schwarzenberg. 1913. Pp. 280. Price, paper, 15 marks; bound, 17 marks.

OF the four articles which constitute the text of this volume, two—viz., the Present Position of Investigations in Regard to Lakes, and more especially of their temperature, by Professor W. Halbfuss, of Jena, and the Houses and Structure of the Habitations of Freshwater Insects, by Dr. C. Wesenberg-Lund, of Hilleröd, Denmark—are of general interest, but the other two—the one on Diving, by Dr. Robert Stigler, of Vienna, and the other on the Significance of the Thymus Gland for the Organism, by Dr. Arno Ed. Lampé, of Halle a.S. —are of special interest to medical men.

Diving is considered from a physiological point of view in three groups: (1) Naked diving—i.e., with arrested respiration and no technical aid; (2) where the diver under water breathes through a tube which opens free to the air—that is, breathes the air at atmospheric pressure; (3) where the diver breathes compressed air, which either he takes with him in a closed vessel or is supplied to him from above. Full justice is done to the work of Dr. J. S. Haldane and to the well-known

investigations of Dr. Leonard Hill in this country. The physiological actions of water pressure are considered on the respiratory movements and the circulation. A large number of the author's own observations are included in the text. It is proposed in a second communication to give an account of the chemistry of respiration during diving or prolonged submersion.

For medical men, however, the chief interest attaches to the article on the thymus gland. After dealing with the phylogeny, ontogeny, anatomy, morphology, and involution of the gland, its physiology is next passed in review. From the historical point of view much may be left unread, as the early methods of excision (1845 onwards) were too crude to allow of conclusions of any value to be arrived at. With improved surgical technique the effects of its removal resulted in the establishment of the fact by Basch in 1902 of the intimate relationship between the gland and ossification—the changes in the bones being most profound, a result confirmed by Klose and Vogt. A description is given of the phenomena manifested by dogs after removal of the gland as observed by Klose and Vogt. Its removal also affects the nervous system, leading to a condition which has been called idiotia thymopriva, and to a remarkable change in the relation of the peripheral nerves to electrical stimulation. It is not a gland concerned in blood formation, but rather an organ with an internal secretion which may act on blood-forming glands. It is stated that in every case of Graves's disease there is an abnormality of this gland, and it is maintained that there is a dysfunction not only of the thyroid but of the thymus as well. Short references are included as to its relation to the organs of reproduction.

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*The Microscopist's Vade-Mecum: A Handbook of the Methods of Microscopic Anatomy.*

By ARTHUR BOLLES LEE. Seventh edition. London: J. and A. Churchill. 1913. Pp. 526. Price 15*s.* net.

THE last edition of this book was reviewed in THE LANCET of Oct. 28th, 1905. Since then very considerable strides have been made in microscopical technique, and so far as we can judge from a judicious perusal of the 929 distinct subjects dealt with, the author has brought this vade mecum well up to date. It is much more than a mere compendium giving methods useful to the human microscopist. It takes practically all animated nature for its province, so that students of vertebrate as well as invertebrate structure will find a plethora of methods to choose from. Indeed, for an inexperienced person there is almost too much. In this edition something like 700 new entries have been made, but owing to judicious pruning the size of the book has not been increased.

The general arrangement remains as before, with few illustrations, but an endless number of formulæ with references to the sources from which they are taken. In Part I., which occupies about one-half of the text (pp. 1–253), general methods are dealt with. The methods of Gibson for the use of media for mounting, which do not call for essential oils or other clearing reagents, have been introduced (paragraph 449, p. 247). Objects can be mounted direct from alcohol, whereby unstained or insufficiently stained elements acquire the right degree of visibility, thus enabling the observer to see details which are invisible in the usual mounting media. The media consist of solutions of gum sandarac in "camsal" and other solvents. "Camsal" is a liquid formed by the mutual solution of two solids—salol and camphor. One of these media is called "euparal," a mixture of camsal, sandarac, eucalyptol, and paraldehyde. The new media can be obtained from Grübler and Hollborn, of Leipzig. In Part II. special methods with examples are given. In view of the importance of unicellular organisms as the cause of many diseases, the cytological methods have been carefully overhauled, while the sections relating to blood and blood parasites have been largely rewritten. The advances in the technique of the nervous system have also demanded many changes and the incorporation of new matter. The evidence of the importance of the neurofibrillar structure of nerve fibres and cells has led the author to incorporate the new methods for their demonstration, while the section on neurofibrils has been almost entirely rewritten. Formerly the silver staining methods of the nervous tissues were often most capricious in their results. The more certain and precise methods of Cajal are given at length from the original sources.

The typography is excellent, with sufficient space between the sections, while the titles in black lettering enable the reader quickly to pick out what he desires to find. A compendium like this cannot be made all at once; it must grow by judicious additions and deliberate excisions, and we think that in both these directions the author has exercised a wise choice. The result is a reliable and up-to-date companion in the intricacies of modern histological technique.

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*Clinical Surgical Diagnosis for Students and Practitioners.*

By F. DE QUERVAIN, Professor of Surgery and Director of the Surgical Clinic at the University of Basle. With 510 illustrations and 4 plates. Translated from the fourth edition by J. SNOWMAN, M.D. Brux. London: John Bale, Sons, and Danielsson, Limited. 1913. Pp. 779. Price 25*s.* net.

IN our notice of the original of this work we recognised that it was above the average, both in design and execution, and we are pleased to see it in an English version. In each case which the author puts forward for study and elucidation he starts from the symptoms of which the patient complains, and so works up to the cause of the symptoms. Little more than a glance is required to show the reader that the book is the product of an extensive knowledge of teaching the subject and an intimate acquaintance with the needs of the student. There are more than 500 illustrations, and these have been chosen with care; the coloured plates also are clear. Some represent the areas of the skin corresponding to the different nerve roots; another excellent plate shows diagrammatically the various forms of tuberculous disease of the knee, and in similar way, where it is necessary, the help of illustrations is drawn upon. The translation has been well done, and only occasionally do we meet with expressions which are not used in this country, as, for instance, "Fibro-adenoma phyllodes" and "cellular emphysema."

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*Die Serodiagnose der Syphilis und ihre Bedeutung für Diagnose, Therapie und Prognose.*

Von RUDOLPH MÜLLER, Assistent der Klinik für Syphilologie und Dermatologie in Wien. Berlin und Wien: Urban und Schwarzenberg. 1913. Pp. 171. Price, paper, 7 marks; bound, 8.59 marks.

THE importance of the presence of a positive Wassermann reaction on the diagnosis and prognosis of syphilis can hardly be over-estimated, and

therefore this reaction deserves to be carefully studied. It cannot be said that we have yet obtained the best method of applying the test, and any modification which will simplify it without impairing its trustworthiness would be a decided gain. Dr. Rudolph Müller's work is a thorough study of all the features of the subject. The various modifications are first given, and then the best form of the test, according to the author's opinion, is described in detail. The second portion of the book deals with the clinical aspect, and the author discusses the presence of a positive reaction in certain other diseases; next the value of the test in the different stages of syphilis; then the effect on the test of antisyphilitic treatment; and lastly, the use of the reaction in the treatment. A short bibliography of the papers contributed by the author on the subject is appended.

## LIBRARY TABLE.

*Lip-reading.* By EDWARD B. NITCHIE. London: Methuen and Co. 1913. Pp. 324. Price 5s. net.—This is a valuable little book, inasmuch as the author gives in it much personal experience from a double point of view—he speaks both as an expert lip-reader and as a teacher of that difficult accomplishment. The qualifications do not often run together. The book is divided into two parts. In the opening chapters of the first part will be found a very clear statement of the difficulties and shortcomings of deaf people, while the failure of the general public to be sympathetic towards the disabilities of the deaf is shrewdly noticed. The failure to help the deaf over some of the hard places of their lives is very common among us, and Mr. Nitchie's appeal loses none of its force because he is brave enough to be humorous where the situation he describes is often pathetic. To the deaf his advice is equally salutary. In a moderate yet forcible way he urges those who cannot hear to strive against the results of their deprivation, while he shows the public with what little inconvenience to themselves and with what little change in their usual social habits they can bring helpful intercourse to those bereft of one of the most important senses. Chapters IV. to XI., inclusive, deal with a general view of the method of teaching lip-reading and each of the lines that a teacher or pupil should work along contemporaneously. It is interesting to note how Mr. Nitchie dwells upon the training of the pupil's mind to follow thought as being equally important as that of training his eye to read words, or perhaps more so. It is not of necessity the possession of a pair of sharp eyes that helps to make a good lip-reader; an alert and receptive mind is wanted, and be it observed such receptiveness can only be cultivated by sympathetic instruction. Another important point on which the writer insists is the nature and speed of the speech which should be used to the lip-reading deaf; there must be no mouthing and no excessively slow speech, but distinct utterance. This is a hint that will be of great value to deaf people if it is taken by those in their environment. The second part of the book gives outlines of lessons and sections of lessons for use by both teachers and pupils. It includes stories and conversations, and sentence, word, and sound exercises. All such systematic instruction can be made of great use to adults who have lost their hearing and are studying lip-reading, as well as, to a large extent, to teachers. Doubtless the classification of sounds will present a new view to many, and indeed it gives room for discussion, but it is interesting as well as practical, for it has been arranged from the point of view of an experienced lip-reader. As a rule, we obtain our schematic information from teachers, not themselves dependent upon lip-reading for communicating with their fellow men. The series of lessons contains many useful points which could scarcely have been made by anyone who had not passed through the ordeal of losing one sense and learnt to substitute another for it. The book will be useful to teachers of the deaf, for they will understand better from it the difficulties of their pupils. The pupils will find in it much help and encouragement. And medical men might well recommend its perusal to those members of the public interested in social work. If people in general would read and apply the hints contained in the opening chapters, the everyday hardships of the deaf would be considerably alleviated. How real those hardships are is little appreciated, and as little is the valuable bond between the deaf and the world at large which is furnished by lip-reading.

*Lippincott's New Medical Dictionary.* A Vocabulary of the Terms used in Medicine and the Allied Sciences, with their Pronunciation, Etymology, and Signification. By HENRY W. CATTELL, A.M. (Laf.), M.D. (U. of P.). Third edition. London and Philadelphia: J. B. Lippincott Company. 1913. Pp. 1108. Price 21s. net.—In reviewing the first edition of this work in THE LANCET of Feb. 18th, 1911, we expressed our satisfaction that this dictionary, unlike most of the other American medical dictionaries, had made no attempt to introduce innovations in orthography, but on the contrary tended towards conservatism. We are very glad to find this feature continued. In this edition alterations and additions have been made on 312 pages, and the definitions have been improved in many cases. The illustrations are not very satisfactory. On p. 862 a figure of schistosoma hæmatobium is given and ascribed to Braun, which is identical with, but much inferior to, the figure given in Webster's "Diagnostic Methods" (p. 562), where it is ascribed to Tyson, after Looss. The portrait of Professor Welch, moreover, is hardly flattering. It is indeed a question whether such pictures as those of generalised favus (p. 342), abrachia in an amelus (p. 5), Babylonian clay model of a sheep's liver (p. 513), pellagra (p. 701), a quack salver from an old print (p. 802), the portraits, and many others compensate for the waste of precious space they occasion, space which such pains have been otherwise taken to economise. Notwithstanding these criticisms the dictionary is a good one, and it would hardly be matter for wonder if in virtue of its orthography alone it secured a decided preference among English readers. It is interesting to note that under the word "Doctor," reference is made to an article in THE LANCET of July 16th, 1910, on "The Title of Doctor in Many (55) Tongues."

*Die Arbeitstätte des Chirurgieen und Orthopäden (mit Winken für Einrichtung von Privatkliniken).* Von Dr. OSCAR LANGEMAK, Spezialarzt für Chirurgie und Orthopädie in Erfurt. Mit 45 Abbildungen. Jena: Gustav Fischer. 1912. Pp. 189. Price, paper, 5 marks; bound, 6 marks.—This is a very practical guide to the fitting-up of the consulting-room of a surgeon. Suggestions are given as to the furnishing of the waiting-room, and though in their entirety they are not quite applicable to this country they contain much that is valuable. The aim of the author is to give such directions for the

establishment of a surgeon's rooms as to enable him to carry out the work he has to do in the most convenient manner, yet with the least expenditure of money, and especially to provide all the apparatus needed for orthopædic surgery. The second part deals with the establishment of a private hospital, and describes how it should be fitted with the necessary furniture and apparatus. The book is well written, and it should be useful to many surgeons in this country, though allowance will need to be made for the difference in customs.

*Urologischer Jahresbericht, einschliesslich der Erkrankungen des männlichen Genitalapparates.* Redigiert von Prof. Dr. A. KOLLMANN und Dr. S. JACOBY. Leipzig: Dr. Werner Klinkhardt. 1912. Pp. 499. Price 20 marks.—This very useful compilation must have entailed a great amount of work, but it has been well spent, for it will be of great value to all who especially devote themselves to this branch of surgery. The titles are given of a very large number of papers and articles which have appeared in the medical periodicals, and the more important have been abstracted. Such reference books are of very real service.

*Reference Handbook of Gynæcology for Nurses.* By CATHARINE MACFARLANE, M.D., Gynæcologist to the Woman's Hospital of Philadelphia. Illustrated. Second edition, thoroughly revised. London and Philadelphia: W. B. Saunders Company. 1913. Pp. 156. Price 6*s.* net.—Dr. Macfarlane's little handbook contains a great deal of useful information arranged mainly in a tabular form and is well adapted for the instruction of nurses. There are a number of useful illustrations, principally of the instruments required for various operations, and these should prove helpful. The directions are clear and not too complex, and the author has been fortunate in her selection of the information she gives.

## JOURNALS AND MAGAZINES.

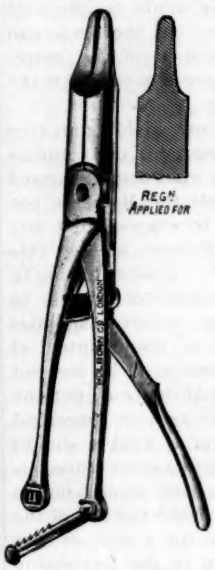
*Journal of Anatomy and Physiology.* Conducted by Sir WILLIAM TURNER, K.C.B., Professor ALEX. MACALISTER, Professor ARTHUR THOMSON, Professor ARTHUR KEITH, and Professor ARTHUR ROBINSON. Vol. XLVIII., Part I. October, 1913. London: Charles Griffin and Co. Annual subscription, 21*s.* post free.—The greater part of the contributions published in this issue deal with anomalies and variations rather than with normal anatomy.—Congenital Anomalies of the Fifth Lumbar Vertebra are dealt with by Dr. J. Appleton Nutter, of McGill University. Many researches have been devoted to this markedly unstable region of the spinal column, but Dr. Nutter has advanced the study by means of X ray examinations of the living subject. He gives a series of tracings from skiagrams which are extremely instructive and worthy of more finished draughtsmanship than has here been devoted to them.—Mr. A. G. Timbrell Fisher gives a well-recorded case of Complete Absence of Both Internal Carotid Arteries. The study is a careful one and throws light upon the development of the stapedial arteries.—A case of Congenital Atresia of the Duodenum is described by Dr. Reginald J. Gladstone. The atresia occurred at the usual site in the entrance of the common bile-duct. The paper is admirably illustrated.—A valuable detailed study of the Anomalies of Bones in the Lacrymal Region is contributed by Mr. Hugo Flecker, of Sydney. The paper deals with cases of absence of the lacrymal bone and the analysis of examples of perilacrymal ossicles.—Mr. J. S. B. Stopford deals with Certain Anomalies of the Renal and Spermatic Arteries, and describes the development of the abnormal conditions met with.—Mr. T. B. Johnston discusses at length Extroversion of the Bladder Complicated by the Presence of Intestinal Openings on the Surface of the Extroverted Area. A case of this type is described, and the various theories which have been put forward to explain it are discussed. Mr. Johnston considers that rupture of the cloacal membrane fully accounts for the condition present.—Normal anatomy is represented by a careful and well illustrated study of the Innervation of the Nodal Tissue of the Mammalian Heart by Dr. Jean Meiklejohn, and a paper on the Nomenclature of the External Genitalia of the Female, by Dr. F. Wood-Jones.—Professor David Waterston makes a contribution to technical methods of research by describing a process of Reconstruction in Modelling Clay.—A note on a skull said to be that of Emanuel Swedenborg is added by Mr. W. Rutherford.

*Knowledge.*—The November issue of this publication contains several articles of scientific interest, the longest being the story of the chin, by Dr. Louis Robinson, whose work on the prehensile power of infants and investigations on animal life is well known. The story of the chin deals with the evolution of the lower jaw bone, together with the development of the genial tubercles and the muscles of the tongue, and the author puts forward the suggestion that the chin may be considered part of the necessary mechanism of articulate speech. The article is illustrated with many reproductions of photographs of casts of jaws. The establishment of a race of white canaries with black eyes by Mrs. Maud S. Martin is another contribution which will appeal to those interested in the results of breeding. The author has succeeded in breeding true to colour. Professor A. W. Bickerston opens a series of articles on stellar spectroscopy for beginners, with an introductory sketch of the subject.

*The Proceedings of the Prehistoric Society of East Anglia*, Part III. of Vol. I., 1912–13 (London: H. K. Lewis), contains among several important papers on archæological problems the interesting presidential address of Dr. W. Allen Sturge, M.V.O., read at Norwich in December last. For the most part the address deals with prehistoric chronology, a subject on which workers in many branches of science are daily throwing more and more light. Dr. Sturge's contribution to the subject centres round certain classes of striated neolithic flints, and the climatic changes induced by variations in the obliquity of the earth's axis. The address is well illustrated. Among other papers is one by Mr. H. Dixon Hewitt, who describes prehistoric human remains at Little Cornard, Suffolk, and an account of the Red Crag Shell Portrait by Dr. Marie C. Stopes, round which discussion has revolved for 32 years. There is also a report on the specimen by a committee of the East Anglian Prehistoric Society.

# New Inventions.

## AN INTESTINAL CRUSHING CLAMP.




THE crushing clamp here illustrated is intended for use during the radical abdomino-perineal operation for cancer of the rectum. The proximal half of the blade has been made nearly an inch in breadth in order that the crushed part of the pelvic colon shall be sufficiently wide to permit of easy division between two ligatures. The distal portion of the blade is much narrower as it is only necessary to crush the mesocolon, for hæmostatic purposes, along the line of division. The advantage of using this clamp is that it greatly minimises the risk of infection when the pelvic colon is divided.

The Holborn Surgical Instrument Company, Limited, Holborn Viaduct, London, E.C., have made the instrument for me.

W. ERNEST MILES,
F.R.C.S. Eng.
Upper Wimpole-street, W.

# THE LANCET.

*LONDON: SATURDAY, NOVEMBER 29, 1913.*


## The Royal College of Surgeons of England: The Position of the Members.

AT the twenty-ninth annual meeting of the Fellows and Members of the Royal College of Surgeons of England, held on Thursday, Nov. 20th, at the College, Mr. BRINDLEY JAMES, in accordance with the notice published in THE LANCET, moved a resolution affirming the desirability of admitting Members of the College to direct representation on the Council of the College. The suggested alteration in the constitution of the College was supported by several speakers and carried as on previous occasions. This is a reform which has always been backed by THE LANCET in one shape or another, and we have never altered our position. But whereas not long since similar views were held by the majority of the Members of the College as an active part of their professional creed, it must be apparent to us all that to-day the Members as a body regard the inability either to sit upon the Council or to vote for those who shall sit upon it with considerable equanimity. A few years ago a substantial number of the Fellows of the College, and not only that, but a good proportion of the Council, were in favour of some such changes, some method of reform in the constitution of the corporation, whereby Members would be admitted to a share in the government; but those who can recall the origin and development of the movement must feel that it no longer has behind it the vitality and conviction of yore.

A letter from a veteran Fellow, wielding an ever youthful and incisive pen, appeared in our columns last week, and well represents what may be termed the aristocratic attitude towards the Members, but it would be a great mistake to suppose that any increase in the number of Fellows having this attitude would mean necessarily a greater feeling in that body against an extension of rights to the Members. Mr. BRUDENELL CARTER supplies reasons why nobody should be disappointed at not being a Fellow of the College if he has not passed the examinations and paid the fees; but the precise question with which we are now concerned is not whether the position of a Fellow should be made more accessible, but whether there is any reason why the Member, as such, should not be allowed a share in the choice of the Council of the College, or be himself eligible for a seat on that Council. Sir RICKMAN GODLEE, in the interesting address on the origin and growth of the College which he delivered on the occasion of the opening of the American College of Surgeons, alluded in a clear and definite manner to the demands of the Members for an increased share in the government of the College, and stated the reasons which now prevail with the College authorities for opposing the movement. It is probable that these reasons are shared to-day by many more Fellows and Members than was the case 20 years ago, and this is the point which those working in the cause of reform appear to miss, despite the evidence.

The arguments in favour of the proposed changes in the government of the College are still stronger than any that can be brought against them—at least, we are unable to change our views here—and there was a time not long ago when a part at least of what was desired by many Members of the College, backed by Fellows of high standing in the Council, seemed to be approaching realisation. But, and for reasons many of which appear in the files of this journal, fortune deserted the side of the reformers. A letter from Mr. WILLMOTT EVANS in our columns this week represents, we have no doubt, what many Fellows and Members of the College now think. The Society of Members of the Royal College of Surgeons of England are advocating, with fervour but without much judgment, a cause with which we have been long associated. And now the feeling of the Members upon the whole question has so slackened in intensity that it is difficult to say that any general demand remains among them for developments in the way indicated by Mr. BRINDLEY JAMES'S resolution.

## The Leprosy Problem.

HOW to prevent and how to cure leprosy are pressing questions of the day, for England has many colonies and dependencies in which this terrible disease is prevalent year by year. In India there are thousands of lepers, while in Ceylon, the Straits Settlements, the Malay Peninsula, Australia, New Zealand, the islands of the Pacific, the Continent of Africa, as well as in our possessions in the Western hemisphere the malady is present. In a very interesting lecture delivered recently before the Royal Society of Medicine, and published in our present issue, Dr. H. BAYON, research bacteriologist to the Union Government of South Africa, discusses the "Leprosy Problem in the British Empire," and urges the enforcement of measures for getting rid of the scourge. Among other suggestions he presses strongly for compulsory registration of all lepers and their segregation in properly conducted asylums, or in settlements when the numbers are too great to be accommodated in such institutions. Dr. BAYON advises these measures, not only on the score of humanity, but also because they constitute a sound business policy. In this we fully concur, for few persons nowadays will argue that the prevention of disease is not a good investment for any nation.

The beneficial results of the segregation of lepers are not altogether confined to restricting the spread of the malady, for they include also the bringing of these unhappy sufferers under medical care and supervision in circumstances where, along with good food and shelter, appropriate treatment may have a chance of alleviating their condition, if not of curing their disease. The occurrence of imported cases in England need not cause much perturbation. Leprosy may be regarded as a malady of uncivilised or partially civilised races, and its chief predisposing causes comprise personal uncleanliness, overcrowded and dirty dwellings, combined with a dietary that is deficient in quality or insufficient in quantity. Though the precise way in which leprosy spreads is not definitely known, it is believed to be communicable from person to person, and is regarded as inoculable. Suggestion has been made that its diffusion may depend upon the agency of insects; and mosquitoes, flies, lice, bugs, and ticks have all been accused of transmitting the infection. Apart from isolation of the sick, the preventive measures should, in our opinion, be based upon improved sanitation, using the term in its widest sense. The eradication of the native filthy habits and customs which predispose to, and assist in spreading, leprosy is recognised to be a matter attended with many difficulties; it would therefore seem that the hope for the future must lie in the education of the rising generation in the elements of personal and domestic hygiene. While necessarily much time will have to be spent in thus educating the native peoples, it may be asked if nothing can be done by medical treatment to cure the unfortunate wretches already stricken with this loathsome disease? As we have already pointed out from time to time in these columns there is no specific remedy for leprosy, and few of the drugs put forward in the past have maintained for any length of time a reputation for benefiting the leper. Perhaps the remedy which has best stood the test of time up to the present is chaulmoogra oil, for it has the grave objection of often giving rise to unpleasant gastric disturbance. Recently, however, the use of a refined form of the oil has obviated this, especially when it is injected hypodermically, alone or in combination with camphor and resorcin. Good results from this method have been obtained at Manila, where at present a further extended trial of the remedy is being made.

Much was expected from the vaccine treatment of leprosy, but this can hardly be said to have advanced beyond the experimental stage. At one time high anticipations were raised by the claims of nastin, but these have not been realised in many cases; and since the unsatisfactory result of the prolonged trial of this remedy in British Guiana, under the personal direction of Professor G. DEYCKE, the originator of nastin, was made public, confidence in it has to a large extent been lost. Lately, however, interest in this method of treatment has been revived by a report by Captain L. B. SCOTT, I.M.S., civil surgeon of Sylhet, published as a supplement to the last annual report of the Sanitary Commissioner for Assam. In this details are given of 46 cases treated by nastin during the last three and a half years, the average duration of the treatment of the cases being 13 months. Captain SCOTT states that 40·8 per cent. were "cured" or "greatly improved," 45 per cent. were "improved," while 14·2 per cent. remained *in statu quo* or got worse. He believes that he is justified in regarding nastin as a very valuable remedy for leprosy and one that is "capable of curing not a few lepers, of restoring the health of the majority to a very considerable degree, and of arresting the progress of the disease, certainly for some years, in almost every instance if the treatment is started before the most advanced stages are reached." In comparing his own favourable results with the failures of others he suggests an ingenious explanation of this discrepancy. Some races of mankind are probably more susceptible to leprosy than others, and the more resistant would respond more readily to treatment than those who are less resistant. Nastin may be regarded as a kind of vaccine prepared by Professor DEYCKE from a culture of the virus taken from a Turkish leper. The action of vaccines is generally accepted as being specific. If, therefore, the suggestion be correct that specifically different strains of leprosy exist, it might be expected that nastin, prepared from a Turkish leper, would have an active effect upon lepers in Turkey or other Aryan countries, especially in Asia; while it would produce little or no effect upon lepers belonging to distant parts of the world inhabited by the Mongolian or Negroid races. Hitherto the most favourable reports on nastin have come from Turkey, Persia, and India, the unfavourable reports emanating from China, Japan, Australia, and South America. In order, therefore, to secure uniform success with this remedy Captain SCOTT believes that it will be necessary to prepare the nastin from virus taken from a leper of the country in which the treatment is to be applied. In any case, whether this be the right explanation or not, he insists that there should be no hesitation in giving the Indian lepers the benefit of nastin as it is now prepared.

## The Definition and Treatment of Neurasthenia.

TO-DAY the term "neurasthenia" is a well-worn one. It sprang into being 30 years ago, or more, to signify a morbid condition as old, we may well believe, as human life itself, and after having been in circulation for the better part of half a century its serviceableness as coin of the realm of current thought is by some being called in question. An exact definition of neurasthenia is still to seek. The fact is that neurasthenia stands for a state or a symptom-complex which is neither specific nor pathognomonic, yet none, we imagine, will

dispute the usefulness of the term. Its usefulness, indeed, has been its undoing, for it is freely applied to pathological states that differ widely in their causation and prognosis. The earliest writer to popularise the expression seems to have been aware of its seductive comprehensiveness: among the signs of "American nervousness" specially worthy of attention he included "the unprecedented beauty of American women" and "American oratory, humour, speech, and language"! A revision of the whole conception is a task which the medical profession ought to face, for confusion obscures truth, and hesitation both in the matter of formulating a definition and, clinically, in reaching a certain diagnosis can only mean that our ideas on neurasthenia are not clear.

While, in our opinion, the dismemberment of traditional neurasthenia is inevitable, we do not, of course, deny that in the meantime we must continue to recognise, without being able in pathological language fully to explain, the existence of a condition of fatigability, both psychical and physical, with which is associated in greater or lesser degree a train of symptoms—again both psychical and physical—almost entirely of a subjective kind, and as elusive from the objective view-point of the examiner as their presence is a reality to the patient. Whether it occurs by itself, in young or old, or as an episode in the course of an organic or accepted nutritional disease, the state of neurasthenia offers a problem in therapeutics to the importance of which the recent valuable discussion at the Medical Society of London amply testifies.[1] Perhaps the most striking feature of the numerous contributions to that discussion was the diversity of view as to what really constitutes neurasthenia and the natural corollary of diversity of opinion as to the best treatment to pursue. The advocates both of purely physical and of purely psychical methods, specialists in ophthalmology and in mental disease, the surgeon, the psychotherapeutist, and the medical electrician, all contributed materially from their experience. No one whose ways lead him among such patients can afford to ignore the lesson which this wealth of experience teaches: it is that the objective examination of the neurasthenic patient is just the one which the practitioner will be unwise to curtail. It is because of the subjectivity of the symptoms that he must investigate with care, else he will fail to detect the floating kidney responsible for an abdominal neurosis; he will miss the astigmatism and consequent eyestrain which is originating or perpetuating a neurasthenic headache; he will not associate the patient's cyclothymia with an auto-intoxication from carious teeth or intestinal stasis. The real causes of many neurasthenic symptoms may elude the physician from their very simplicity and obviousness.

There is more, however, in the treatment of neurasthenia than merely the due recognition of the cause and the adoption of means for its removal. The mental side of the disease obtrudes itself. The neurasthenic temperament requires adequate handling. When *l'homme à petits papiers*, as CHARCOT called him, enters the consulting room and the diagnosis of neurasthenia is made forthwith, our best efforts at treatment along approved mechano- or hydro-therapeutic lines will be rendered nugatory if we do not at the same time devote attention to the patient's morale. It is of greater importance to know what sort of patient has a disease than what sort of disease a patient has. At the discussion Dr. RISIEN RUSSELL did well to emphasise the necessity of giving due weight to a consideration of the patient's temperament and even his nationality before commencing treatment. It is only by taking a comprehensive survey of the individual and his environment that lasting results can be obtained. Yet it is just here that the physician has his greatest opportunity. By impressing his personality on the patient, by evincing interest in the details of his life, and by showing a sympathetic appreciation of the circumstances in which he is placed, the physician can accomplish in the treatment of the neurasthenic what is often denied him where other diseases are concerned. One of the most successful of continental authorities has said that the doctor should be to his neurasthenic patient *un peu un ami*. He must be, consciously or unconsciously, a psychotherapeutist. If we do not go perhaps quite so far as Sir DAVID FERRIER, who in his presidential remarks said that rational psychotherapy was the ideal treatment and that all other treatments were merely adjuncts, at least we would impress on the practitioner that it is the management and treatment of his patient from mental and physical standpoints equally to which his intelligent and unremitting efforts should be directed.

[1] THE LANCET, Nov. 22nd, pp. 1453, 1469, and present issue, p. 1542.

# Annotations.

"Ne quid nimis."

## SEX AND PSYCHOLOGY.

IN the interesting address which he recently delivered at the Institute of Hygiene on the Nervous Factor in Women's Health Dr. T. Claye Shaw had to deal with a subject which in its practical aspects is of importance just now. Women are taking, and will in the future continue to take, an increasing part in the world's work, and on that account it behoves us to know, so far as science can tell us, what is the value of their special contribution to the common task and what effect their participation in that task is likely to have on their own welfare and on the welfare of society. Unfortunately, the help that science can give for our guidance in this matter is still very scanty in amount and rather uncertain in value; it hardly extends, indeed, to more than a few time-worn generalisations, whose significance is further impaired by the vague and ambiguous terms that are used to convey them. To say, for instance, that women are more

emotional than men does not give much illumination until we are agreed as to the meaning of "emotion" and "emotional," and when opinions have been brought into harmony on the point of definition they will probably be found to differ vehemently on the truth of the general assertion. Dr. Shaw evidently felt the hampering influence of our defective knowledge and our ill-defined terminology, and limited himself, more or less, to a critical and inquiring attitude, which is certainly to be commended in a subject that so generally induces on either side a spirit of fanatical certitude. As he justly pointed out, we know too little to be able to foretell what will be the ultimate development and effect of the tendencies which we see at work to-day; all we can do is to point out that violent revolution is not the way of nature, and that the adjustment of the new to the old, never a very easy matter, is likely to be particularly arduous when it affects relations so complex and so far-reaching as those involved in the social and biological institution of the family. And Dr. Shaw also did well to sound a warning note with regard to the dangers of an excessive consciousness of sex; the direction of the mind to sexual function is far too common a tendency in much of the literature and drama of our time, and it is well that an alienist of Dr. Shaw's distinction should call attention to the morbid influence that such a tendency is likely to exercise on the young.

## MORTALITY AMONG AFRICAN NEGROES.

AT what age does a negro in tropical Africa die? As there is no official registration of birth, and the natives are quite careless about the ages they state for themselves, this question cannot be directly answered. But Dr. R. Mouchet, of Liège (Belgium), who has been working for two years at Léopoldville in the Middle Congo, where he has performed over 100 post-mortem examinations of natives (the offer of a shroud silenced objections), asserts in the *Archiv für Schiffs- und Tropen-Hygiene* for October, that the native dies far younger than the European. His reasons are interesting. In the first place, a grey-haired native is rare, nor is obesity often seen. Cataract, tumours, atheroma and kidney disease are hardly ever found, and ossification of the costal cartilages is exceptional. Further, a native generally dies from a single uncomplicated disease, and when his body is examined post mortem there are frequently no associated lesions found accompanying the effective cause of death; they have not had time to develop. The negro has a lesser vital resistance than the European, and this whether for a disease new to him, as tuberculosis, or for tropical diseases against which his race has struggled for generations. Dr. Mouchet ascribes this feeble resistance to poor food, bad housing, and intestinal parasites. In 127 bodies examined ankylostoma occurred in 114; only seven were quite free from intestinal parasites. Then, too, the native dies very often from amœbic dysentery, or from the perforations it causes, rarely living till a liver abscess has time to form; while the European survives the first onset of the disease, and if he succumbs later it is due to the abscess. Tuberculosis is the chief cause of death, and gave occasion for 37 in 100 necropsies. Small-pox has almost disappeared, thanks to vaccination with dried vaccine. Trypanosomiasis has been overcome at Léopoldville, where there are now no longer any glossinæ. In another part of this journal comes a wail from French West Africa about the great increase in insanity due to trypanosomiasis, and the need for specially instructed physicians for its management.

## BRONZED DIABETES.

BRONZED diabetes, or hæmochromatosis, is a rare disease which was first described in 1882 by Hanot and Chauffard. So far only 60 cases have been recorded. It is characterised by three conditions—cirrhosis of the liver, diabetes mellitus, and deposition of pigment in the viscera, and in the great majority of cases in the skin also. In the *Medical Chronicle* for September Dr. Donald E. Core has reported two cases and discussed its pathogeny, which is still obscure. In the first case the patient was a stevedore aged 56 years. He was admitted to hospital after losing weight and strength for three months, during which his skin darkened. His previous health had been good. Soon after the onset he became persistently thirsty, and during the last month there was polyuria. He drank beer in moderation and there was no history of venereal disease. On examination he was slightly built and very intelligent. There was slaty-grey pigmentation, uniform over the face and extremities, but accompanied on the abdomen and upper part of the thighs by several darker, freckle-like spots. The tongue was clean and there was no pigmentation of the mouth. The liver was enlarged, firm, and tender. The spleen was felt as a firm, rounded mass on inspiration. The left retina showed moderate pigmentation. The urine averaged 115 oz. daily, and contained sugar in quantities varying from 2000 to 3700 grains. Under rest and treatment he gained weight, but after two months diacetic acid appeared in the urine. He was sent to a convalescent hospital, but returned after eight weeks, having lost weight, and complaining of severe epigastric pain. From 3000 to 4000 grains of sugar were passed daily, and diacetic acid was always present. Six weeks after readmission he died comatose. During life a piece of skin was removed from the abdomen. It gave a definite iron reaction and microscopically showed pigment granules in the lower layers of the cutis vera. At the necropsy hepatic cirrhosis, hypertrophy of the kidneys, perisplenitis, fibrinous peritonitis, and aortic and coronary atheroma were found. The viscera were pigmented. Microscopic examination of the pancreas revealed overgrowth of fibrous tissue. The majority of the parenchymatous cells were crammed with light brown pigment granules, including those of the islands of Langerhans. In the second case the patient, a bricklayer aged 50 years, was admitted to hospital with a six weeks' history of progressive weakness with attacks of giddiness. For four weeks there had been attacks of drowsiness and epigastric pains coming on an hour after meals with vomiting. For three weeks there had been intense thirst and polyuria. On examination he was emaciated and somnolent. There was faint light-bronze pigmentation of the arms and legs. The liver was enlarged and the epigastrium was slightly tender. The tongue was dry and fissured, and the breath smelt of acetone. The urine averaged 104 oz. in the 24 hours, and contained 2400 grains of sugar and diacetic acid. He died comatose on the thirteenth day after admission.

The necropsy showed hepatic cirrhosis and fibrosis of the pancreas with degeneration of the parenchymatous cells. Of the three conditions found in hæmochromatosis—pigmentation of the skin, hepatic cirrhosis, and diabetes mellitus—the most constant is the cirrhosis, for cases have been recorded in which the cutaneous pigmentation and glycosuria were absent. However, in all cases pigmentation of the viscera and a certain amount of pancreatic fibrosis have been found post mortem. Though cirrhosis of the liver is always present the patients appear to suffer little, if at all, from the usual symptoms of this disease. The pigment present was first accurately described by von Recklinghausen, who differentiated two substances—hæmosiderin and hæmofuscin, of which the former contains iron. Lately, however, the idea has gained ground that these two bodies are varieties of the same substance. As to the pathogeny of the disease, three views have been brought forward: (1) That the diabetes is primary and produces the pigmentation; (2) that the hepatic cirrhosis is primary; (3) that the hepatic cirrhosis and diabetes are both due to some unknown toxin. The first view is now discredited, for the diabetic symptoms are terminal, and there may be no glycosuria at all. The second view is ably supported by two American writers—Potter and Milne. They point out that in most cases the cirrhosis is of long standing, and that in ordinary cases of cirrhosis of the liver pigment is frequently deposited in that organ. They consider that in rare cases of hepatic cirrhosis one of the metabolic products that escape destruction possesses hæmolytic properties, the result of which is the deposition of pigment. It seems to be more probable that the glycosuria and hepatic cirrhosis are the result of deposition of pigment in the pancreas and liver. This may be due to toxin of intestinal origin which so affects the cells of these organs that their manner of dealing with blood pigment is altered. The pigmentation ultimately leads to fibrosis.

## THE CONNEXION OF BIG GAME AND TRYPANOSOMIASIS.

MORE than six years ago Mr. F. C. Selous, the African hunter-explorer, committed himself to the assertion that the disease of cattle and other domestic animals called nagana, or tsetse fly disease, already proved by Sir D. Bruce in 1896 to be a trypanosome infection, was limited to those districts in subtropical Africa in which the buffalo existed. When the buffalo disappeared, he declared, tsetse fly disease disappeared too; when it invaded an uninfected area there the disease broke out. Besides the buffalo he incriminated also the eland and some other species of big game, though in lesser degrees. These conclusions, be it noted, were based solely upon observations of the distribution of nagana and of game, though they had been anticipated on other grounds by Bruce. They were not put forward as original; and they were freely criticised by other big game experts, including Sir Alfred Sharpe and Sir F. J. Jackson, whose fame as experienced African hunters is almost equal to that of Mr. Selous. A full account of the controversy as it then stood, with a plea for the suspension of judgment and of death sentence upon the game until scientific research should have decided the question at issue, was published in the *Times* of Dec. 10th, 1907. Such researches, as Dr. J. L. Todd points out in a letter published last week,[1] have now been carried out. Koch, Bruce and his subordinates, Kinghorn, Yorke, and others have shown that many species of wild game harbour trypanosomes without exhibiting symptoms of ill-health; and that tsetse-flies which have been bred up trypanosome-free, and are then fed on infected wild animals, can convey fatal trypanosomiasis to susceptible domestic animals. Since the tsetse-fly cannot be exterminated and trypanosomiasis cannot be cured, it is tempting to suppose that a universal massacre of the wild game might conceivably abolish trypanosome diseases, sleeping sickness included. At any rate, there is a clear case made out for an experimental essay in a selected district to prove or disprove this theory and to clear up cognate questions of tsetse-fly bionomics. The experiment would necessarily occupy months, or even years, and the possibility of vitiation would require to be excluded by the most meticulous precautions against sources of error. For instance, even the crocodiles, if Koch's views are accepted, would need extermination, an exceedingly difficult end to encompass. If the game were convicted of acting as the sole trypanosome reservoir, the logical outcome would be the extension of the experiment to all habitable parts of Africa where trypanosomiasis has occurred. This argument is put with great force by Sir D. Bruce in the *Journal of the Royal Army Medical Corps* for November. The wholesale destruction of the African wild game would be most repugnant to every animal lover, and could only be justified by the most stringent necessity. But if complete proof is obtained that thus, and only thus, can tropical Africa be purged of these deadly plagues the death warrant must be signed, however heavy the hearts of the judges. We support Dr. Todd in his advocacy of Dr. Yorke's proposed experiment, provided that it can be planned so as to give a final and absolutely convincing result, scientifically unassailable.

## PERIARTHRITIS AFTER HERPES ZOSTER.

CERTAIN sequels of herpes zoster—neuralgia, modifications of sensibility, muscular atrophy, cyanosis, and œdema—are well known, but articular or osseous lesions are little recognised. At a meeting of the Société Médicale des Hôpitaux of Paris on Oct. 31st M. Georges Guillain and M. Daniel Routier reported a case in which chronic periarthritis of the hand followed herpes zoster. A diabetic woman, aged 66 years, was admitted into the Saint-Antoine Hospital under the care of Professor Chauffard in September, 1913. In 1911 she suffered from herpes zoster of the left upper limb. The vesicles began on the back of the hand and then extended to the forearm. They covered the back of the hand and affected the intradigital folds, but did not extend beyond the first phalanges. On the forearm they remained localised to the dorsal aspect. There was continuous pain, with paroxysms at times, in the affected region. From the beginning the patient complained of stiffness in the finger-joints and could not close her hand; the attempt provoked pain. The eruption lasted 15 to 18 days, and after it disappeared there was œdema of the hand for a long time. When the pain ceased the stiffness of the joints still remained and the hand could not be used. In the two years which had elapsed there had been some improvement. On

[1] THE LANCET, Nov. 22nd, 1913, p. 1504.

examination extension, separation, and approximation of the fingers were normal, but flexion both of the metacarpo-phalangeal and of the interphalangeal joints was limited. Opposition, adduction, and flexion of the thumb were also limited. When told to shut her hand she could not do so; the fingers remained 3 or 4 centimetres from the palm. An attempt to complete passively the flexion revealed fairly strong resistance, and pain was produced. All the other movements of the upper limb were normal, and there was no alteration of sensibility. Radiography showed that the bones of the hand were normal. The changes were in the periarticular fibrous tissue. A few cases have been published of arthritic changes consecutive to herpes zoster, but in these the bones were affected. At a meeting of the Société de Neurologie de Paris in 1910 M. Guillain and M. Pernet reported a case of arthropathy of the hand localised in the area supplied by the affected nerve root. In 1911 M. H. Claude and M. E. Velter reported two cases of zona of the upper limb followed by lesions resembling arthritis deformans.

## ASSISTANT MEDICAL OFFICERS OF ASYLUMS.

A MEETING of assistant medical officers of the public asylums in the Midlands of England was held at the Queen's Hotel, Birmingham, on Nov. 18th. The object of the meeting was to discuss the disabilities under which assistant medical officers labour. Thirty-five public asylums had been circularised by the provisional secretary, Mr. F. J. Stuart, senior assistant medical officer, Northampton County Asylum, and from 30 of these communications expressing sympathy with the object of the meeting were received. It was unanimously resolved that an association should be formed to protect the interests of this branch of the medical profession. A guarantee fund of £100 was raised and a provisional committee was appointed, but no further action was taken pending the meetings to be held by assistant medical officers in other parts of the country. These are announced as follows: 1. North of England and North Wales at the Midland Hotel, Manchester, Dec. 3rd, 3 P.M. 2. West of England and South Wales at the Royal Hotel, Bristol, Dec. 4th, at 3 P.M. 3. London and the South-East of England at the Westminster Palace Hotel, London, Dec. 5th, at 3 P.M.

## URINARY FISTULA AT THE APEX OF SCARPA'S TRIANGLE.

THE name of "A Surgical Curiosity" is justifiably attached to an extraordinary case which has been published by Captain L. B. Scott, I.M.S., in the *Indian Medical Gazette* for October. A native, about 20 years of age, complained of a discharge of urine from his right thigh, with painful and frequent micturition. He stated that about two years previously an abscess formed in his thigh and burst, and that the hole had ever since discharged pus and urine. Pain and frequency of micturition had been more recent incidents of the case. The man was very weak, thin, and anæmic. His urine was foul and contained pus. At the apex of Scarpa's triangle on the front of the right thigh was a small sinus. A probe travelled along this for six or seven inches through the obturator foramen into the pelvis, where it impinged upon a stone. A sound passed into the bladder revealed the same stone. A lateral lithotomy was performed, and a large phosphatic stone removed from the bladder. The inside of the bladder, when explored by the finger, seemed to be a mass of fungating granulations coated with phosphates. This deposit was gently scraped away and the bladder well flushed out. The sinus was then thoroughly curetted; it soon healed and gave no further trouble. The lithotomy opening took several weeks to close, but in two and a half months the patient was able to leave hospital in greatly improved health, passing clear urine through the urethra, and with both the sinus and the perineal wound well healed. On sectioning the stone a piece of bamboo, an inch and a quarter in length by three-sixteenths of an inch in thickness, was discovered in the centre; round this nucleus successive layers of phosphates had been deposited. On carefully questioning the patient he then recollected having once fallen out of a tree, when a piece of bamboo had penetrated his thigh. It was pulled out and the wound healed up, the abscess subsequently forming at the place of entry.

## PERFORATED DUODENAL ULCER.

IN the current number of the *Edinburgh Medical Journal* are published the results of a collective investigation of all the cases of perforated duodenal ulcer which occurred in the practice of the leading Edinburgh surgeons during the years 1896–1912 inclusive, a total of 200 cases being thus available for study. It is curious to find that in the first seven years of this period only 12 instances of the condition were recorded, from 1903–07, 43 cases, and from 1908–12 no less than 145. The condition is evidently rare, these 145 cases representing the total number occurring in a population of some 500,000 persons. No age is immune from the danger, 11 patients being under 20 years of age (the youngest of all a boy aged 14), while 15 cases were in patients between 60 and 70. Middle life is, however, the epoch of its maximum incidence, 138 patients being between 20 and 50 years of age. It is noteworthy that in nearly 10 per cent. of the cases there had been no previous dyspeptic symptoms, and in another 30 per cent. these had been trivial. No definite premonitory signs of perforation could be determined, but the most frequent time of its occurrence was about 1½ to 3 hours after a meal, the time when the pain of duodenal ulcer is usually most acute. The onset is signalised by sudden agonising pain, referred either to the umbilicus or to a point a little to the right of the middle line, though in a few instances it was greatest in the right iliac fossa or the hypogastric region. Vomiting occurred in the greater number of instances, but there was little febrile reaction. Severe vomiting and in rare instances hæmatemesis were of bad prognostic import, as was the combination of a subnormal temperature with a pulse-rate over 110. There were usually tenderness and rigidity of the abdominal wall in the region of the upper part of the right rectus muscle, and the liver dulness was absent or diminished in 89 out of 147 cases in which the point was noted; absence of this phenomenon is of no diagnostic import, while its presence is confirmatory of perforation. Apart from its action in masking important symptoms and making diagnosis difficult, the use of morphia appears to be advantageous, the ultimate results working out rather better in the cases in which it was given. In some 20 per cent. of all the cases there occurred a period

of reaction a few hours after the perforation, in which pain and shock seemed to pass off and the patient felt so well as often to be unwilling to submit to operation. The procedure adopted necessarily differed in the various cases, a primary gastro-enterostomy being done in some instances, not in others, and the peritoneal exudate being sometimes swabbed out, at other times douched away, in yet other cases left *in situ*. The results seemed to show that swabbing is an effectual method of treatment. The principal post-operative complications were bronchitis, pneumonia, and empyema, which together formed a total of 17 cases. Subphrenic abscess appeared in 5 cases, parotitis in 3, hæmatemesis in 4, while in 3 instances where the perforation could not be closed a duodenal fistula developed, and the patients died from rapid marasmus. Of the whole number (200) 121 recovered and 79 died, the percentage of recoveries rising in recent years. As to after-results, of 40 treated by suture alone 19 suffered later from dyspepsia and 8 were submitted to subsequent gastro-enterostomy. Of 52 treated by primary gastro-enterostomy only 5 suffered afterwards from dyspepsia. The reporters do not, however, consider the evidence sufficient to decide definitely the question as to the routine use of this procedure.

## THE GRIEVANCES OF AUSTRIAN MEDICAL STUDENTS.

THE medical students of the University of Vienna have decided "to go on strike" because they regard the new rules pertaining to examinations as very unsatisfactory. Whilst under the old rules the students were permitted to pass the preliminary examinations in such an order that they found time to prepare also for the "Rigorosum," or severer examinations, at the same time, now they can no more do so, but are required to pass these preliminary ones within a certain time limit. Also the other examinations must be passed within a certain time of each other, and if this is not done the preceding ones will not be recognised as valid. The idea was to prevent the students from wasting their time with less important subjects. The students tried to obtain a modification of the rules to which they principally objected, and also to bring into force some other regulations which might be useful for them. As, however, their endeavours were fruitless they "struck" work. Our Vienna correspondent reports that negotiations are being held between the two parties, but so far without any result.

## SUBDURAL INJECTION OF SODIUM BROMIDE IN DELIRIUM TREMENS.

FOR two years the patients admitted to the wards of the Cincinnati Hospital with delirium tremens, or developing it subsequent to admission, have been subjected with gratifying success to a method of treatment which is explained by Dr. S. P. Kramer in the *Boston Medical and Surgical Journal* for Oct. 30th. The amount of cerebro-spinal fluid is increased in delirium tremens to such an extent that from 50 to 60 c.c. can readily be withdrawn by lumbar puncture. The fluid thus obtained is very toxic, producing a fall of blood pressure when injected into dogs. It appears, therefore, that any measure which would substitute for this toxic fluid some influence counteracting the cerebral œdema, which, according to Dr. Kramer, is an important factor in the pathogenesis of delirium tremens, would prove a powerful weapon in the treatment of the disease. Animal experiments were undertaken with this end in view, the chief outcome of which was the discovery that a 1 per cent. solution of sodium bromide could be injected into the spinal canal without immediate or remote injury to the central nervous system. The next step lay in the application of this discovery to the human subject in delirium tremens. Withdrawal of as much as 50 to 60 c.c. of cerebro-spinal fluid is followed by injection of a similar amount of sterile 1 per cent. sodium bromide solution into the spinal canal with a syringe. There is no risk of increased intradural pressure. The sodium salt must be used; potassium bromide has irritant properties which render it unfit for this purpose. Twenty patients have been treated in this way, with results that Dr. Kramer calls brilliant. There is usually an immediate improvement which is only transitory; 12 to 15 hours later, however, the delirium disappears permanently. If a relapse should occur it may be controlled by a second injection. He illustrates his claims by a brief account of four cases, and if the experience of others should corroborate these accounts we are, indeed, in possession of a method of controlling this dangerous complication which will prove of the utmost value. He does not say whether any difficulty was experienced in performing lumbar puncture; patients with delirium tremens are not, as a rule, amenable to restraint, but even the most refractory subject could be controlled by an anæsthetic, a step which would be justifiable in view of the benefit to be obtained.

## PATENT MEDICINES AND THE REVENUE.

THE Commissioners of Customs and Excise report that in the financial year ended March 31st, 1913, the number of licences issued to makers or vendors of patent medicines was 43,118 (39,849 in England and 3269 in Scotland), as compared with 43,131 in the preceding year. In 1912–13 the amount of duty collected in respect of these licences was £10,780. In the same year the net receipts from the medicine stamp duty was £328,319 (£325,420 in England and £2899 in Scotland), as against £327,857 in 1911–12. The duty does not extend to Ireland.

THE Bradshaw Lecture will be delivered in the theatre of the Royal College of Surgeons of England by Mr. G. H. Makins, C.B., Vice-President, on Friday next, Dec. 5th, at 5 o'clock. The subject of the lecture will be "Gunshot Wounds." Fellows and Members of the College are invited to attend. Others who are not Fellows or Members will be admitted on presentation of their visiting card.

AT a meeting of the Education Committee of the London County Council on Wednesday last a report from the Higher Education Subcommittee was confirmed, recommending that the Council should join with the University of London in representing to the Government the advantages of Somerset House as a centre for the University.

THE Home Secretary has appointed Mr. W. P. G. Graham, M.B., M.R.C.S., and Mr. G. F. Rogers, M.A., M.D., to be inspectors of vivisection under the Cruelty to Animals Act, 1876.

# THE CHEMISTRY OF A CUP OF COFFEE.

FROM time to time numerous analyses of coffee have been made and published which, while giving some insight into the chemistry of the coffee berry, have not necessarily enlightened us as to the position of affairs in regard to the liquor obtained when coffee is prepared in the way commonly enjoined. The chemistry of the cup of coffee will obviously leave out of consideration the chemistry of the "grounds." It is the infusion with which the following laboratory notes deal, and certain fresh indications, we believe, have been obtained which are worth presenting in view of their medical interest. The story is far from complete, but there are interesting incidents in it which, as far as it goes, are worth recording.

### *A Comparison between Coffee and Tea.*

From a pharmacological or, what should amount to the same, a dietetic standpoint tea and coffee ought in certain ways, at all events, to act similarly, since both contain the alkaloid caffeine which has a well-known and marked effect of stimulation upon the central nervous system. It is generally admitted, however, that the two beverages, though having one thing in common, afford different results. Tea, it is well to point out, contains a much larger proportion of the alkaloid than coffee, but in the preparation of tea in ordinary domestic practice a much smaller quantity of material is used than is the case with coffee. A common formula enjoined in the making of tea amounts to the preparation of 1·25 per cent. infusion of the leaf. Similarly, in the preparation of coffee the quantity of coffee usually directed to be used signifies a 6 per cent. decoction. Since tea contains from 3 to 4 per cent. of caffeine, and coffee seldom more than 1 per cent., it follows that as regards this alkaloid both infusions of coffee and tea made on common domestic lines will contain practically the same amount of caffeine volume for volume of fluid. The inference is that whether it be a cup of coffee or of tea, the dose of alkaloid will be the same. But according to the present investigation the caffeine in coffee infusion has quite different associates from those in tea. This would appear to be the case, inasmuch as while little caffeine is extracted from tea by cold water, we find that practically the whole of the caffeine in coffee is taken out. There seems to be little doubt, as we have shown in previous articles upon tea,[1] that the caffeine in tea is for the most part combined with tannin in the form of caffeine tannate, which is not very soluble in cold water, but is easily soluble in hot water. We think this is an important observation, for it points to the probability of caffeine existing in coffee in a quite different form which is easily soluble in cold water. Subsequent experiments showed that the caffeine in coffee is combined with a peculiar acid allied possibly to tannic acid, but exhibiting different properties from the tannin present in tea. Thus this acid (it has been called caffetannic acid by some observers) is not particularly astringent, has a sour coffee-like taste, does not coagulate gelatin, gives a light green colouration with perchloride of iron (whereas tannic acid of tea turns it black), does not make caffeine solutions thick as does tannic acid, does not precipitate alkaloids—e.g., quinine—and, in fact, shows altogether different properties from the tannic acid of tea. It gives a precipitate, however, with lead acetate from which the acid can be separated by sulphuretted hydrogen. When coffee infusion is saturated with ammonium sulphate a precipitate is obtained which contains a small proportion of the total caffeine in the free state, whereas a tea infusion similarly treated gives an abundant precipitate containing nearly all of the caffeine, this precipitate according to our observations consisting chiefly of caffeine tannate.

[1] The Chemistry, Physiology, and Æsthetics of a Cup of Tea, THE LANCET, Jan. 7th, 1911, and Dec. 2nd, 1911.

### *The Absorption of Caffeine Modified by its Associates.*

The caffeine tannate of tea is precipitated by weak acids, and the presumption is that it is precipitated by the gastric juice, and therefore the caffeine is probably not absorbed until it reaches the alkaline alimentary tract. In the case of coffee, however, in whatever form the caffeine may be present, it is soluble in both alkaline and acid fluids, and therefore the absorption of the alkaloid probably takes place in the stomach. This fact may have an important physiological significance when we consider the comparative stimulating effects of the two beverages. If our view is correct coffee should act more promptly than tea as a stimulant and restorative, looking to its physiological action as due for the most part to caffeine. In practice it is generally accepted that coffee is a more powerful restorative than tea. The use of strong coffee as an antidote in poisoning by narcotics, notably morphia, is of interest in this connexion. Tea is mentioned for the same purpose, but only rarely. Apart from the consideration that caffeine has probably a more rapid action when taken in the form of coffee than in the form of tea, because the caffeine in coffee is more readily absorbed, it must also be remembered that coffee is often made with a generous proportion of the powdered bean as in the case of the after dinner "black" coffee, the view being that the secret of good coffee is to make it strong. This, of course, is an entirely æsthetic demand, which may likely enough be opposed to physiological morality.

### *The Strength of Cold Water Extracts of Coffee compared with Boiling Water Extracts.*

The fact that the caffeine in coffee is completely soluble in cold water suggested making a comparison as to the composition of the cold and hot water infusions in regard to other constituents. For this purpose several types of coffee were chosen, all of which reached this country through Costa Rica. As will be seen from the accompanying table, the varieties examined were as follows: Raw (i.e., unroasted) Costa Rica, common quality; raw Costa Rica, finest quality; pale roasted Costa Rica, common quality; pale roasted Costa Rica, finest quality; high roasted Costa Rica, common quality; and high roasted Costa Rica, finest quality. The results are instructive, and we may proceed to consider the differences in composition of the infusions, both cold and hot, shown where raw, pale roasted, and high roasted coffee are employed, and the relationships, if any, of these differences to the discrimination supplied by the expert taster, who describes a particular coffee as, in his own words, "common" or "finest."

It is a somewhat remarkable fact that cold water extracts from coffee the same weight of materials as boiling water, but it must be admitted that the former infusion is somewhat less palatable than the latter. Chemically, however, there is little difference

between them, and we may presume that physiologically a cold water extract of coffee will be much the same as a hot water infusion, leaving out æsthetic considerations, although these, of course, are exceedingly important, from all dietetic aspects. It is probable that cold water fails to extract certain oily bodies or fats which contribute attractive taste and aroma. The total extract is frequently higher in cold than in hot water. And not only is caffeine extracted from coffee equally well by cold and hot water, but this is true of the mineral salts and of the peculiar acid known as caffetannic acid, the acid which corresponds to the tannin of tea. In regard to the proportion of materials soluble in cold water coffee shows an entirely different result to tea, inasmuch as while coffee yields about 25 per cent. of its weight to cold water (an amount which is not increased when hot water is used) tea yields only 12 per cent. of its weight to cold water, which is increased to 25 per cent. when the infusion is made with hot water. Again, cold water extracts from tea only 17·5 per cent. of its total caffeine, while from coffee it extracts the whole. Similarly, cold water extracts from tea 13 per cent. of its total tannin, while coffee under the same treatment yields practically the whole of its caffetannic acid.

*The Effect of Roasting.*

An infusion of green or unroasted coffee is singularly nasty to the palate, and it follows that the roasting process renders coffee the palatable article that it is. The chemistry of roasting amounts largely to a caramelisation process, during which certain oils and aromatic principles are formed as products of a mild destructive distillation. Curiously enough, there is little loss of caffeine in this process, as our results show, which is remarkable in view of the fact that caffeine sublimes at high temperatures. There are two degrees of roasting adopted—viz., pale roasting and high roasting. The important chemical effect of roasting, according to our analyses, is to diminish considerably the amount of caffetannic acid. If the figures in the table be consulted it will be seen that while in an infusion of raw coffee (unroasted) the caffe-tannic acid amounts to 9·60 per cent., it is in the pale roasted 6·60 per cent., while by further roasting, as in the "high roasted," it is reduced in the infusion to from 3·63 to 3·90 per cent. What part caffetannic acid exactly plays as a dietetic constituent of coffee it is difficult to say, but if it should prove to be an undesirable element, then the high roasted coffees are least open to objection on this account. It may be noticed also that the raw coffee yields a greater percentage of soluble constituents to both cold and hot water than high roasted coffee, the pale roasted coffee showing intermediate results. Roasting, amongst other things, has, therefore, the effect probably of rendering certain bodies insoluble—e.g., albumins—while the slight burning effect upon carbohydrates would produce possibly some free and of course insoluble carbon.

*Quality of Coffee in Relation to Chemical Composition.*

From the results recorded in the table it will be seen that no definite relation can be traced between the æsthetic quality of coffees, classed respectively as "common" and "finest," and the chemical composition of the infusions which they yield. It may be noted that there is no important difference in the amount of the drug caffeine when the common and finest varieties are examined. It is probable that the æsthetic values—flavour, body, aroma, and so forth—are related in some way to the amounts of oil bases or aromatic principles present, and these are in any case minute. Whether they are present in appreciable quantity or not doubtless depends upon the care spent upon the roasting process. At any rate, it is conceivable that a point in the roasting process could be reached which would deprive the coffee of all attractive flavour, while it is certain that the infusion of the raw unroasted berry is not fit to drink on account of its unpleasant taste. Recently it has been announced on more than one occasion that pyridin is an important constituent of coffee. We have certainly found it present, but not in sufficient quantities to estimate. It is rather a curious fact that some authorities mention that coffee often relieves asthma, while pyridin is described as "useful in the treatment of asthma" and "beneficial in cardiac dyspnœa, emphysema, and angina pectoris," and, finally, that "it is probably the relieving agent of various cigarettes and powders smoked or burnt for asthma and whooping-cough." Another constituent of coffee produced by roasting is caffeol, a nitrogen-containing oil, but it would be impossible to differentiate the quality of coffee upon an analysis pursued in this direction, inasmuch as the amount found does not exceed more than 0·06 per cent. It is doubtful whether it has any further value from a dietetic point of view than that supplied by its influence in pleasing the senses. When isolating caffeine from coffee infusion the solvent (chloroform) takes out also a non-crystalline substance which unlike caffeine is soluble in ether. This substance has a very strong, pleasant, but somewhat bitter flavour of coffee. The yield is different according to the quality of the coffee examined, and it is possible that this principle is a determining factor in the judgment given by the expert coffee taster. It is a product of roasting and does not exist in raw coffee.

*The Analysis of Hot and Cold Infusions of Coffee.*

| Constituent. | Raw Costa Rica (common). | | Raw Costa Rica (finest). | | Pale roasted Costa Rica (common). | | Pale roasted Costa Rica (finest). | | High roasted Costa Rica (common). | | High roasted Costa Rica (finest). | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Hot infusion. | Cold infusion. | Hot infusion. | Cold infusion. | Hot infusion. | Cold infusion. | Hot infusion. | Cold infusion. | Hot infusion. | Cold infusion. | Hot infusion. | Cold infusion. |
| Total extract ... | 29·16 | 30·83 | 29·60 | 31·50 | 25·33 | 24·00 | 23·50 | 25·66 | 24·30 | 24·00 | 25·60 | 23·00 |
| Ash of extract ... | 4·16 | 3·88 | 4·00 | 3·88 | 4·16 | 5·66 | 3·50 | 4·50 | 4·66 | 4·00 | 4·00 | 4·50 |
| Caffetannic acid... | 9·60 | 8·63 | 9·66 | 7·83 | 6·10 | 5·80 | 6·60 | 5·90 | 3·90 | 3·16 | 3·63 | 3·87 |
| Total caffeine ... | 1·00 | 1·33 | 1·21 | 1·56 | 1·11 | 1·11 | 1·05 | 1·06 | 1·23 | 1·11 | 1·05 | 1·20 |

The infusion of coffee presents practically very

little material that is of direct nourishing value, but by diminishing nervous fatigue, by virtue chiefly of the caffeine present, it may increase muscular power. It is not itself a builder of tissue. The use of coffee after dinner, it is of interest to note, is justified in a large number of cases by the fact of its stimulating effect upon the vital centres, and it is said to serve to some extent as an antidote to alcohol. It is commonly claimed to remove drowsiness; as a matter of fact, in many subjects it produces drowsiness, but this is usually followed quickly by marked wakefulness. The practice of drinking coffee after a meal for the sake of the stimulus which is experienced has much to be said in its favour dietetically. There is no reason for supposing that coffee possesses any value as a food. The berry contains a quite important proportion of fatty substances (12 per cent. average), but these are necessarily excluded from the infusion, as owing to their insolubility they remain in the "grounds."

According to our analyses again the protein contents of a cup of coffee are small, approximating to 1·25 per cent. of the coffee extracted. This amount can have little dietetic significance. There is also a trifling quantity of dextrin and sugar present besides traces of alcohol, which again can possess no importance from a physiological point of view.

## REPORT OF THE SANITARY COMMISSIONER WITH THE GOVERNMENT OF INDIA FOR 1911.

(*Concluded from p. 1498.*)

### *Health of the Indian Army.*

THE average strength of Indian troops in 1911 was 131,213; the admissions to hospital were 515·6 per 1000, the number constantly sick 19·8, the deaths 4·48, and the invalids 4·43 per 1000. If the deaths of men on furlough be included the ratio is 6·78. These ratios are all the lowest on record except that for the total number of deaths (including men on furlough), which was only 6·42 in 1909. The chief causes of sickness were malaria (105 admissions per 1000), to which may be added pyrexia of uncertain origin (31) and sandfly fever (0·9); next, respiratory diseases (30·2), dysentery (22·6), and venereal disease (14·9). The most fatal disease was pneumonia (0·98 death per 1000); next, enteric fever (0·42), malaria (0·42), and respiratory diseases (0·34). The Northern Army showed an admission rate (571·6) and a death-rate (5·26) higher than those in the Southern Army (510·5 and 4·17 per 1000 respectively), but this disparity was less than usual. The highest admission ratios were for troops on the Western Coast (Bombay, Cannanore, &c.), 983·9; at Rangoon and Port Blair, 741·9; and in Burma inland, 742·6. The large stations that suffered most from malaria were Bombay (646 admissions per 1000), Dera Ismail Khan (410), Hyderabad, Sind (411); but, as already mentioned, 1911 was not a fever year. The Bombay outbreak (over 400 cases occurring in October, November, and December in the 96th Berar Infantry) appears to have been due to the regiment encamping in jungle at the foot of the Western Ghats in October; at Hyderabad the prevalence was due to swamping of the cantonments and city; at Bangalore the presence of marshy ground within the regimental lines is stated to have been the cause—the improvement of this is "under consideration." At Mandalay over 400 cases occurred, mostly in the latter half of the year. There are numerous anopheline breeding places in channels leading into the moat. In one regiment (the 92nd Punjabis) the admissions were only one-third of those in the 91st Punjabis, the former body having been provided with mosquito curtains. The treatment of anopheline breeding grounds is "being proceeded with." Tubercle of the lungs continues to show a most satisfactory decrease: the admissions were only 2·1 per 1000, the lowest rate hitherto recorded. Among Gurkhas the admissions were 3·6 and the deaths 0·70 per 1000; excluding Gurkhas these ratios were 1·9 and 0·14. Pneumonia is still much the most frequent cause of death in the native army, the mortality ratio being 0·98 per 1000. This, however, is a great improvement on the ratios for 1910 (1·34), and for the decennium 1901–1910 (2·26 per 1000). Venereal diseases (14·9 admissions per 1000) show a reduction on the preceding year (16·9), and on the decennial ratio, 1901–1910, which was 21 per 1000. The Gurkhas at Almora gave the high admission rate of 105 per 1000.

### *Health of the General Population.*

The vital statistics for the various provinces of British India have been calculated on the populations ascertained at the Census of 1911, which, however, are not stated in the report. According to "Whitaker's Almanack," the population of British India at this Census amounted to 244,267,542 persons. The birth-rate for the whole of British India was 38·58 per 1000, compared with a mean ratio of 37·88 for the previous five years. There was considerable variation in the rates for the different provinces, that for Madras being 30·4, while in the Central Provinces it was as high as 49·4. The ratio was below the quinquennial average in Eastern Bengal and Assam, Central Provinces, Madras, and Lower Burma; in the remaining provinces it exceeded the average. The death-rate was 32·01, compared with 34·85 for the preceding quinquennium. The lowest provincial ratio was 23·1, in Madras, and the highest, 44·95, in the United Provinces. The ratio was above the quinquennial average in the United Provinces and in Ajmer-Merwara; in all the other provinces it was lower. Of the total 32·01 per 1000 death-rate, "fever" accounted for 17·63, and in the United Provinces the ratio of such deaths reached 27·94 per 1000, while in Madras and in Upper Burma it was only 7·4 per 1000. Plague caused 733,582 deaths, equalling 3·07 per 1000; the areas chiefly affected were the Punjab (8·89 deaths per 1000), the United Provinces (7·09), and Bombay (5·13). Cholera caused 354,000 deaths (1·48 per 1000), Bengal (2·37) and the United Provinces (2·51) being most severely affected. Small-pox, with a death-rate of 0·25, prevailed chiefly in Madras, where the ratio was 0·6 per 1000.

### *Indian Jails.*

The mean daily number of prisoners in India, Burma, and the Andamans during 1911 was 109,099, among whom the death-rate was 19·09 per 1000, compared with 22·57 in the decennium 1901–1910. Excluding the Andaman Islands, where the conditions of life differ widely from those in other Indian prisons, the death-rate was only 18·44 per 1000, ranging from 11·29 in the North-Western Frontier Province to 33·65 in Eastern Bengal and Assam. The chief causes of death were tubercle of the lungs (3·65 per 1000), dysentery (2·91), and pneumonia (2·37). The most prevalent diseases were malaria (which caused 113·8 admissions per 1000), abscess, ulcer and boil (61·6), and dysentery (56·6). Malaria showed great improvement on former years, the admission ratios for the quinquennium 1904–08 having been 199·5, and for 1889–1903 as much as 238·4. This is extremely satisfactory, and although the general conditions were undoubtedly favourable, the improvement that has been so marked during the last three years is most creditable to the administration, and a proof of the efficacy of the antimalarial methods employed; quinine prophylaxis is most relied on. Dysentery showed a slight reduction, the admission- and death-rates being 56·6 and 2·91 respectively; in Eastern Bengal and Assam, however, the admissions rose to 223·7. The jail population in this province has increased, and there has been considerable overcrowding. A serious outbreak occurred in Raipur Jail (Central Provinces), where there were 252 cases. Major Forster's antidysenteric vaccine was employed with excellent results. Pulmonary tubercle caused an admission rate of 10·5 and a death-rate of 3·65 per 1000, both increases on the previous year. Precautions are being taken to prevent overcrowding, which is an important factor in causation.

### *Vaccination.*

There was an increase in vaccination in every province, except Coorg, the greatest increase being in Eastern Bengal and Assam, Punjab and Burma. The quality of the operation has also improved, the percentage of success in primary

operations having been 96·34, and in revaccinations 72·82. The percentage of infants protected now reaches 48·01; the ratios varying, however, very greatly, from 69·18 in the Central Provinces and 65·79 in Punjab, to 19·02 in Burma and 8·54 in Coorg.

*Medical Institutions.*

Throughout India there exist 2707 hospitals and dispensaries, at which the number of in-patients treated amounted to 460,671; the operations performed numbered 1,139,060; and the out-patients relieved totalled 28,055,647. There are in addition 1535 private, railway, and "State-special" hospitals and institutions, at which an additional 6,880,857 patients were treated; and 22 lunatic asylums, having an average of 5981 patients, of whom 2124 were criminal lunatics.

*Sanitary Works.*

In Bengal it is stated that there is a steady improvement in the working of the septic tank installations, that the septic tank latrine is now "practically perfect in design," and that a satisfactory type of distributor has been evolved for the filter beds. In the United Provinces interest in sanitation is growing among the inhabitants of the larger towns and the resulting improvements in health and comfort are becoming widely recognised.

*General Remarks.*

In the concluding section of the report a brief account is given of the numerous scientific investigations that have been carried out by the staff of the Research Institutes, of which there are now four in active work in India. By the Central Institute, Kasauli (in the Himalayas), researches have been made into the causation of dysentery, the occurrence of malaria in the Andamans, and of kala-azar in Eastern Bengal and Assam. Six classes of practical instruction have been given during the year at Kasauli and a class of instruction in malaria prevention at Amritsar. Over 30,000 doses of antivenomous serum have been issued, and more than 14,000 of typhoid vaccine, besides many others. The laboratory at Bombay was conducted both as a provincial laboratory and as a plague laboratory for the whole of India. No less than 1,211,170 doses of anti-plague vaccine were issued, nearly twice as many as in the previous year. In consequence of unusually severe reaction after inoculation being complained of in some instances, only "mature" vaccine was issued as far as was possible; and in the case of fresh vaccine the reduction of dose from 4 c.c. to 3 c.c. was recommended. After many failures the investigators succeeded in breeding wild rats (M. rattus) in captivity, and found that in time a race of rats is evolved naturally immune to plague; in process of time, therefore, plague may disappear from India. At the Kasauli Pasteur Institute 2268 patients were given antirabic treatment; statistics are detailed for the whole period during which the institute has been at work, viz., from 1900; 13,580 persons have been treated, of whom 0·6 per cent. were reckoned as "failures"—i.e., they developed symptoms *after* 15 days subsequent to the completion of the course. The total deaths numbered 225, or 1·7 per cent., but in all except 81 cases (0·6 per cent.) the symptoms developed either during, or within 15 days after completion of, the treatment, the fatal result being thus due to delay in treatment being obtained. At the Coonoor Pasteur Institute in Southern India 940 patients were treated; there were 8 deaths in all, and the percentage of failure was 0·53. An account is given of the Indian Research Fund established during the year; investigations are being carried on into kala-azar, cholera, and yellow fever. A special survey is being made of the "New Imperial Delhi" as regards malaria, by Captain E. C. Hodgson, I.M.S. The proceedings of the All India Sanitary Conference at Bombay in November, 1911, are summarised in the concluding paragraphs of the report. This is full of interest, though (like that of last year) much shorter and more condensed than used formerly to be the case.

THE LATE PROFESSOR GOLDMANN.—According to the *Times* a lecture in memory of the late Professor Edwin Goldmann was delivered at Freiburg University, Baden, last week. Professor Aschoff, in speaking of Professor Goldmann, drew attention to his eminence in surgery, and especially to his valuable experiments in pathological anatomy.

# ANNUAL REPORT FOR 1911 OF THE REGISTRAR-GENERAL.

(*Concluded from p. 1492.*)

IN resuming our notice of this report comment will be restricted to matters which are outside the scope of the annual summary already published.

*Standardisation of Death-rates.*

From time to time efforts have been made in these reports to correct rates of mortality by allowing for local differences among the living with respect to sex and age; for, in default of such correction, crude rates are obviously misleading. A population containing relatively few infants and aged persons, as well as an excess of females, will naturally experience a lower death-rate than one in which the opposite conditions prevail. In previous reports both the "direct" and the "indirect" methods of making the necessary corrections have been described, the former of which, although theoretically more accurate, has been found impracticable for general application. By the indirect method the favourable or unfavourable character of the age and sex constitution of the population in relation to mortality is first assessed, and then the recorded mortality rate is modified to compensate for the differences thus disclosed. Populations which from their favourable composition enjoy an advantage as compared with the standard population of England and Wales have their mortality increased by the application of a standardising factor, while the mortality of unfavourably composed populations is diminished by the same process. The factor, once determined, necessarily remains constant until either a new census or an alteration of boundary reveals a change of population. Consequently the labour involved is much less than by the direct method, the calculations for which must be made afresh each year. The death-rates of England and Wales in 1901–1910 represent the "foot-rule" by which the constitution of each population is measured. From a table it appears that according to this measure the average death-rate since registration began in this country has been 19·5 per 1000 living, against 14·3 per 1000 in 1911. In the period 1861–70 the rate stood at 21·3, and even so recently as 1891–95 it was 18·5, since which date the fall has been rapid.

*Mortality in Relation to Sex.*

In the year under notice the standardised mortality of males exceeded that of females by 15 per cent. This excess, which has been gradually increasing since 1837, had never been so great in any previous year. Up to about the year 1860 the excess had been only 6 per cent., but for the last 15 years it has averaged 14 per cent. Since the quinquennial period 1841–45 the standardised mortality of females has fallen by 33·8 per cent., while in that of males the fall has been only 28·2 per cent. In infancy the mortality of males is large; it gradually increases from childhood to a maximum in later middle life, and again declines with advancing age.

*Mortality in Relation to Age and to Locality.*

Among the new tables now presented one (Table 16) is particularly interesting as affording the means of comparing the mortality at each age in the various classes of area in different parts of the country. This table shows the constancy with which the mortality of both sexes in the north exceeds that of other parts of England. The excess is shared by nearly every age group of both sexes in all classes of area. The causes entailing the higher mortality of the north apply impartially to all ages of both sexes and to all classes of area, but what may be the nature of these causes there is no sufficient evidence to decide. As between the midlands and the south there is little difference, the premier position in the various sex and age groups being almost equally distributed among them. Wales stands intermediately between the north on the one hand and the midlands and south on the other. But its mortality is heavier than that of the north at ages from 15 to 35. This is mainly due to excess of female mortality at these ages in all classes of area, but the mortality of males also in the rural Welsh districts is higher than the corresponding rates in the north of England at most ages from childhood to the end of life. Compared

with English experience, tuberculous phthisis is exceedingly fatal among the young women of Wales. But, apart from phthisis, there appear to be other conditions affecting young and middle-aged women in the Principality which make their mortality inordinately high, whether compared with that of English women of corresponding age or with the remaining Welsh population at other ages.

*Mortality in Infancy and Childhood.*

In view of the supreme importance rightly attaching to the preservation of life during the earlier years of childhood, it is significant that the Registrar-General should now extend his survey of young mortality so as to include the loss of life incidental to the period of exclusively home influence—i.e., from birth up to the commencement of school age. This is done in a new table which gives the mortality during the second year of life and the mean annual mortality between the ages of 2 years and 5 in each of the principal areas dealt with. Another table shows, for the same areas, the survivors out of 10,000 births at the end of the first, second, and fifth years of life respectively. The above tables relate to the year 1911; but when the records of successive years have accumulated, a mass of statistical evidence will be available which will materially increase our knowledge of the causes of the still prevailing waste of human life in childhood. According to the experience of 1911 the deaths of infants in the first year after birth constitutes 21·7 per cent. of the mortality at all ages. This was the highest proportion since 1906, and before that year a lower rate had been recorded only once—namely, in 1905. Respecting the local distribution of infant mortality in 1911, we learn that for infants of both sexes jointly the rate varied from 152 per 1000 births in the county boroughs of the north to 86 per 1000 in the rural districts of the south. The constancy with which this rate is increased in towns by the local conditions of life is notorious. From a table it appears that infantile mortality ranges from 147 in the county boroughs to 104 in the rural districts of England. But the fact that the rate in London was much below that of the county boroughs, and slightly below that of the smaller towns, indicates that much of the excess associated with town life is avoidable, since it is not experienced by the largest urban population in existence. The range of variation in the second year of life is very much greater than in the first. It extends from 19·5 per 1000 in the southern rural districts to 59·5 in the county boroughs of the north. The mortality in the rural districts generally at this age is less than half that of the county boroughs, notwithstanding the fact that a larger proportion of weaklings has already been removed from the population of the latter by higher mortality in the first year of life. The result of aggregating the foregoing mortalities shows that of children born in the northern county boroughs 23·5 per cent. die before completing their fifth year, while in the rural districts of the south the loss by death is only about half that proportion, or exactly 11·7 per cent.

*Causes of Death, Primary and Secondary.*

Up to this point consideration has been limited to the general death-rate without reference to cause. So far the statistician is on safe ground. But when the attempt is made to discriminate among the several diseases causing mortality it is necessary to proceed with extreme caution. The reasons for this have been repeatedly discussed in this country, and have never been more clearly set forth than by Dr. Horst Oertel in an article on the inaccuracy of American mortality statistics recently noticed in these columns.[1] As long as the prejudice against necropsies persists, and the vast majority of deaths in this country are registered on clinical evidence alone, just so long will it be justifiable that the accuracy of medical certification respecting particular causes of death should be called in question. This is not to depreciate the efforts of the Registrar-General, who makes the best possible use of the registers in his custody. Far from this, we would once more express our high appreciation of the painstaking manner in which the statistics respecting particular diseases or groups of diseases are presented in the successive reports of the National Register Office.

The elasticity of the card system for statistical purposes is further illustrated by the tabulation for the first time of the secondary causes of the deaths primarily attributed to infectious diseases. Important information with respect to these diseases as causes of deat hand to the combinations of fatal diseases will now be made available by the operation of this system.

*The Fatality of Tuberculosis and Cancer.*

As regards the fatality of the principal diseases space remains for a few remarks only. For details reference must be made to the section of the report contributed by Dr. Stevenson.

The proportions in which the more important diseases contribute to the death-roll are shown by an ingenious diagram, in which the whole area of the circle represents the deaths from all causes, and its several segments represent deaths from particular diseases or groups of diseases.

As might have been expected, considerable attention is devoted to the two diseases to which public interest has been exceptionally attracted in recent years—namely, tuberculosis and cancer. The chief constituent in the first-mentioned condition is phthisis, a term which is now used to cover both pulmonary tuberculosis and "phthisis" not otherwise defined. Together the deaths thus returned amount to 74 per cent. of the total deaths from tuberculous disease, and to 7·4 per cent. of the death-rate from all causes. The standardised death-rate from phthisis was slightly lower in 1911 than in any of the preceding five years, the fall being greater among males than among females. Phthisis mortality increases with "urbanisation" from a minimum in the rural districts to a maximum in the metropolis. The effect of town residence in increasing phthisis fatality is mainly confined to the male sex, the standardised death-rate among whom in London is nearly twice that in the rural areas, whilst in the case of females the excess is only 18 per cent. The statistics of malignant disease continue to be of great and increasing interest. The disease seems to show no abatement, the mortality of both males and females in the year under notice being the highest hitherto recorded. Cancer appears to be more destructive in the urban than in the rural districts. There is little evidence of the prejudicial effect of town-dwelling upon the female sex, but, generally, the standardised cancer death-rate rises from 689 per 1,000,000 in the rural districts to 1016 per 1,000,000 in London.

[1] THE LANCET, Nov. 15th, 1913, p. 1409.

## THE LONDON COUNTY COUNCIL AND MEDICAL AFFAIRS.

*Annual Report of the Asylums Committee for the Year 1912–13.*

THE accommodation for insane persons provided by the London County Council has now over a considerable number of years been kept abreast of the total number of patients for whom the Council has been responsible. There has been a steady rise in the number of insane persons, out of proportion to a rise of population and having no ascertainable relationship with ordinary pauperism. Population declines, but it need not be assumed that because the number of lunatics increases there is some radical defect in conditions of life in London predisposing to mental breakdowns. The report submits that the increase year by year in the total number of patients is accounted for in great measure by a lessening asylum death-rate and by a decrease in the number of discharges, leading to the accumulation of an increasing total of persons under care, as well as by the fact that more persons are sent for asylum care now than formerly. The number of known cases of insanity is thus increased, though there is not a serious increase in the number of fresh cases of mental disease occurring per 1000 of population; indeed, there is good reason to believe that the number of occurring cases of insanity is really not at all increasing. At the beginning of this year the Council was primarily responsible for the accommodation of 20,930 persons. The number of beds available in the county asylums fell short by 656 of the number of patients for whom the county was liable to find accommodation. The difference has been made up by means of reception contracts with other asylums, but to increase the Council's own accommodation expenditure has been authorised for the erection on the vacant site on the Horton estate of an eleventh asylum, in which 2066

beds are to be provided. The Council has further authorised a capital expenditure of £56,000 for the erection and equipment of the Maudsley Hospital. The committee congratulates itself on being able to report substantial progress towards the provision of this institution. The progress if substantial has been extraordinarily slow. It appears that the hospital will add 100 beds to the total accommodation provided for the county. The total number of cases under treatment during the year was 23,793. There were admitted 3675 cases. 1837 cases were discharged and 1664 persons died. The percentage of total recoveries on total admissions was 25·11; of total recoveries on direct admissions 26·93; and of recoveries yielded by direct admissions calculated on the direct admissions 26·20. The percentage of deaths on average daily numbers on the registers was 8·22. The pathologist's report is indicative of the large amount of work done at the pathological laboratory by Dr. F. W. Mott himself and by those who have worked with him. The work done has been embodied in papers read before various societies or otherwise published.

*The Provision of Street Ambulances.*

With reference to the decision of the Council to make all possible use of existing agencies for the purpose of establishing an ambulance service for London,[1] the General Purposes Committee recommended—

That the Metropolitan Asylums Board be invited to prepare and submit to the Council for its consideration a detailed scheme, with estimates of cost, of coöperation with the Council and other authorities in the establishment in London of an efficient ambulance service for street accidents.

Mr. P. A. HARRIS moved an amendment to substitute for the recommendation the following:—

That inasmuch as there is no authority in London which has the necessary stations or appliances with which to commence a satisfactory system of ambulances for street accidents, and as the cost of supplying and working the same must be a charge on the county rate, a special committee be appointed to consider and report forthwith as to the best methods by which the Council itself can organise an ambulance system on the lines now worked by the Corporation of the City of London, and as to the cost of bringing such a scheme into operation.

Mr. J. D. GILBERT, who seconded, said the Committee's proposal only meant further delay, and that a service of 12 ambulances could be provided in the rest of London—i.e., excluding the City—for £12,000.

Mr. ERNEST GRAY, chairman of the committee, urged that the Council ought first to try to coördinate existing organisations.

The Rev. Dr. SCOTT LIDGETT said the Council had all the material for preparing a scheme itself, and in such a scheme the Asylums Board service could be coördinated.

Mr. W. H. ECROYD, a member of the Asylums Board, said that if the Council handed over this work to the Board the scheme to be produced would be an absolutely new service, and that if the Asylums Board had been given power by the legislature to provide an ambulance service it would never have shirked the responsibility and asked another body to carry out the work. On being put to the vote the amendment was lost by 36 votes to 17, and on a division by 66 votes to 44.

Mr. R. C. NORMAN, chairman of the Finance Committee, said that if the Asylums Board would have to promote an entirely new scheme there would be no point in their undertaking the duty in preference to the County Council. The recommendation of the committee was ultimately approved.

## ROYAL COMMISSION OF VENEREAL DISEASES.

AT the third meeting of the Royal Commission on Venereal Diseases, held on Nov. 13th, Dr. R. W. Johnstone, medical inspector of the Local Government Board, gave evidence which followed generally the lines of the report on venereal diseases written by him and issued by the Local Government Board in August last.[2] He found much difficulty in arriving at a conclusion on the question of the prevalence of the diseases in the population. The figures given by the Registrar-General could not be relied upon for information of the number of deaths from venereal disease, and this was inevitable owing to the reluctance of medical practitioners to certify deaths as due to this cause. Dr. Johnstone was impressed with the fact that the death-rates from a number of diseases known to be caused in many instances by syphilis, instead of showing a decrease, as would be expected if syphilis were diminishing, were stationary or tended to increase. Turning to the figures relating to venereal diseases in the army he agreed that they showed remarkable decreases, but he considered that they are subject to some qualifications, and in any case he was not satisfied that they could be taken as an exact reflection of the state of the civil population. He laid stress on the fact that the men in the army, through the instruction given by their officers, are much better educated with regard to these diseases than is the ordinary civilian. For the purpose of obtaining trustworthy statistics of the prevalence of these diseases he thought that certification of deaths should be confidential, but that this change should be made with regard to all diseases and not only venereal diseases. He was of opinion that information of value might be gained if a special return were obtained from general hospitals. On the question of notification of the diseases, he said that he was opposed to the introduction of any compulsory system at the present time. He understood that there was a possibility of a system accompanied by the names of patients being put in force in one of the Scandinavian countries, but in those countries treatment by quacks did not flourish to the same extent as in England, and he thought that there was not the same danger of notification leading to the concealment of the disease. From the point of view of the public health of the country in relation to venereal diseases the objects of primary importance to be secured were the prompt recognition of the diseases and their early treatment. To this end he advocated that facilities for laboratory diagnosis should be provided, and that the available hospital accommodation, which at the present time was entirely inadequate, should be supplemented. He was not in favour of the erection of additional special hospitals to deal with these diseases, as he was anxious to avoid anything which would tend to have a deterrent effect. He was of opinion that the more the general hospitals could be used the more freely patients would present themselves for treatment. Dr. Johnstone pleaded for an attitude of greater frankness on the part of the public with regard to these diseases; if the public were properly educated in the matter and the necessary facilities for treatment were provided there was now an opportunity of reducing the diseases to very small dimensions.

On Nov. 17th statistical evidence as to the prevalence of venereal diseases in the army was given by Lieutenant-Colonel B. H. Scott, Deputy Assistant Director-General of the Army Medical Department. The figures furnished by Lieutenant-Colonel Scott were for the period from 1888 to 1912, and related to the rejections of recruits on account of venereal disease, the admissions to hospital, the numbers constantly sick, and the numbers invalided from the service from this cause. Under all these heads remarkable reductions were shown. The rejections on recruiting had fallen from 0·63 per cent. of the candidates in 1890 to 0·14 per cent. of those presenting themselves in 1912. The admissions to hospital in the United Kingdom, which stood at 224·5 per 1000 of the forces in 1888, had dropped to 56·5 in 1912. There were corresponding falls in the figures of constantly sick and invalids. In the case of India the reductions had been still more marked. Lieutenant-Colonel Scott showed that certain qualifications have to be borne in mind in comparing the earlier with the later years, but he was satisfied that real progress had been made and that the figures did indicate a large measure of success in dealing with the diseases in the army. He was not prepared to say whether the figures indicated a corresponding improvement in the civil population. He attributed the diminutions in the army figures to the greater abstemiousness and temperance now existing, to the fact that the soldier is nowadays better looked after and under better influence in the regiments; barrack conditions also are now more healthy and comfortable and the soldiers' institutes provide greater amusements and healthy recreation. In addition, there has, of course, been considerable improvement in the methods of treating the diseases. Lieutenant-Colonel Scott remarked on the excellent work of the Royal

[1] THE LANCET, Nov. 30th, 1912, p. 1531.
[2] THE LANCET, August 23rd, p. 582.

Army Medical Corps and on the probable absence of concealment of disease from the medical officers. He laid stress also on the great importance of the personal influence of the regimental officers.

## ROYAL COLLEGE OF SURGEONS OF ENGLAND.

### ANNUAL MEETING OF FELLOWS AND MEMBERS.

THE twenty-ninth annual meeting of Fellows and Members was held at the College on Nov. 20th. In the absence of the President, the Senior Vice-President, Mr. G. H. MAKINS, took the chair.

The CHAIRMAN opened the proceedings by drawing the attention of the meeting to several of the matters dealt with in the annual report, which he placed before the meeting. He mentioned that the President was absent, with the permission of the Council, for the purpose of inaugurating the new College of Surgeons of America. He pointed out that the Council had taken action with other medical bodies in regard to the failings of the Insurance Act, with the view of providing material for amending the Act when an opportunity should arise. The College had recognised that many medical practitioners were under a disability in not being allowed to call themselves Doctor in consequence of a by-law of the Royal College of Physicians of London, and the attention of the latter College had been called to this fact. The Royal College of Physicians of London having now made an alteration in its by-laws, those who held the double diploma of the London Colleges would be allowed in future to style themselves Doctor. Mr. Makins proceeded to show how great a benefit the Royal Colleges had derived from the building of the new examination hall, which had been in use for a year. In future the College would gain about a thousand pounds a year from the change. The number of the diplomas issued was shown by the report to be about the same as in the preceding year, and the finances of the College were in a satisfactory state.

Dr. SIDNEY C. LAWRENCE, the secretary of the Society of the Members of the College, then put a number of questions to the Chairman, mainly in connexion with the annual report. Amongst other things he asked how many women had obtained the diplomas of the College, and he was informed that ten had obtained the Membership, one had gained the Licence in Dental Surgery, and three had passed in Public Health. In reply to a further question he was informed that there were in all 1589 Fellows and 17,126 Members of the College. Dr. Lawrence asked the Council to follow the example of the Royal College of Physicians in addressing its Members by the title of doctor, and the Chairman answered that this could be done if Members should express a desire for it.

Sir VICTOR HORSLEY drew attention to a statement in the report that a deputation to the Home Office on the scarcity of subjects was there recorded, and he wished to know if there had been any result.

The CHAIRMAN answered that as yet nothing had resulted, but he would not say that no benefit would follow from what had been done. It seemed to be difficult for politicians to appreciate the need of sufficient subjects.

Mr. F. W, COLLINGWOOD was anxious to know whether the committee of the Royal Colleges and of the Apothecaries' Hall on the Insurance Act was in possession of the evidence that could be given by medical men in general practice, and he was assured by the Chairman that not only were there four general practitioners on the committee, but a number of general practitioners had given evidence before the committee.

Mr. A. S. MORTON complained that nothing had been done to see that a medical man called in by a midwife should receive an adequate fee, although seven years ago the then President (Sir Henry Morris) had assured the annual meeting that the matter was under consideration.

Mr. J. BRINDLEY JAMES then moved the first resolution:—

That this twenty-ninth annual meeting of Fellows and Members again affirms the desirability of admitting Members to direct representation on the Council of the College which as now constituted only represents those Members who also hold the Fellowship, and that it does so in order that the constitution of the Council of the Royal College of Surgeons of England shall be in keeping with modern ideas of true representation.

After a reference to the absence for the first time from an annual meeting of the College of Mr. Joseph Smith, Mr. Brindley James quoted extensively from an article by the late Sir Jonathan Hutchinson on the question of the representation of the Members, in which the moral right of the Members was emphasised.

Dr. LAWRENCE seconded the motion, and insisted that many of the Fellows were in favour of the claims of the Members. Every year there was a deepening distrust of the Council.

Mr. J. VINCENT BELL said that though he was a Fellow he would support the resolution because of the justice of the Members' claims, although he dissented absolutely from most of what had been said by the mover and seconder of the resolution.

Mr. COLLINGWOOD laid stress on the moral right of the Members.

Sir VICTOR HORSLEY moved the adjournment of the debate, for a period of not more than three months, to enable the President to be present, for at the last annual meeting he had declined to say why the Members should not have the franchise, and yet a little later he spoke on the subject at the Society of Apothecaries. This action was lacking in courtesy. When the Members had the reasons of the Council for the refusal of the right of electing members of Council, the Members of the College would be in a position to go to the Privy Council.

Dr. GEORGE JONES seconded the adjournment of the meeting.

The CHAIRMAN declined to put the motion, as the reason given for it was inadequate, for by the by-laws the Vice-President was to take the chair at the annual meeting in the absence of the President.

Dr. J. OLDFIELD complained that the Council always returned the same answer to the demands of the Members.

Dr. LARKIN pointed out that in the parallel case of the College of Physicians the Licentiates had no voice.

Dr. JONES said that the Council neglected the large constituency of the Members, for at present they were elected only by the small number of Fellows.

When the resolution was put to the meeting it was carried *nem. con.*

Mr. MORTON then moved the second resolution:—

That this meeting of Fellows and Members requests the Council to include in their next annual report a balance sheet, showing fully and without reserve the assets and liabilities of the College on Midsummer day, 1913.

He examined various items in the accounts as published and asked for information. He suggested that the Calendar should be distributed to the Members, and he urged that the accounts should give more detailed information.

Dr. OLDFIELD seconded, and he contrasted the amounts received by the College from the Fellows and the Members, and said that he saw no reason why the committee of management should be paid. He inquired how many Fellows and how many Members held the examinerships of the College.

The CHAIRMAN pointed out that nothing had been said about a balance sheet, and indeed it was impossible to draw up a balance sheet as the cost of the museum and library could not be stated.

The resolution was put to the meeting and was carried *nem. con.*

Dr. OLDFIELD then moved the third resolution:—

That this annual meeting of the Royal College of Surgeons of England places on record that it is not satisfied with the administration of the College finances as carried out by the Council, and resolves that such steps as are within its power to take, if any, shall be taken by this annual meeting to remedy the same, and that if it has no power that the steps be taken to secure for it the necessary authority.

Dr. LAWRENCE seconded, and spoke mainly against the Hunterian dinner.

Sir VICTOR HORSLEY also objected to the dinner, and claimed that the College should not endeavour to imitate a City company.

The resolution was carried with one dissentient.

The CHAIRMAN called upon Dr. W. G. Dickinson to move a further resolution which had been set down, but as 30 Fellows and Members were not present the meeting came to an end.

# VITAL STATISTICS.

## HEALTH OF ENGLISH TOWNS.

IN the 96 English and Welsh towns with populations exceeding 50,000 persons at the last Census, and whose aggregate population at the middle of this year is estimated at 17,852,766 persons, 8233 births and 4594 deaths were registered during the week ended Saturday, Nov. 22nd. The annual rate of mortality in these towns, which had been 13·9, 13·3, and 13·8 per 1000 in the three preceding weeks, declined to 13·4 per 1000 in the week under notice. During the first eight weeks of the current quarter the mean annual death-rate in these towns averaged 13·6 per 1000, which coincided with the rate observed in London during the same period. Among the several towns the death-rate last week ranged from 5·6 in York, 6·7 in Acton, 7·4 in Southend-on-Sea, 7·5 in Derby, and 7·9 in Lincoln, to 18·6 in Liverpool, 18·7 in Merthyr Tydfil, 18·9 in Smethwick, 19·3 in South Shields, and 20·1 in Great Yarmouth.

The 4594 deaths from all causes were 144 fewer than the number in the previous week, and included 361 which were referred to the principal epidemic diseases, against numbers steadily declining from 925 to 380 in the six preceding weeks. Of these 361 deaths, 149 resulted from infantile diarrhœal diseases, 76 from diphtheria, 50 from measles, 33 from whooping-cough, 32 from scarlet fever, and 21 from enteric fever, but not one from small-pox. The mean annual death-rate from these diseases last week was equal to 1·1, against 1·3 and 1·1 per 1000 in the two preceding weeks. The deaths of infants (under 2 years of age) attributed to diarrhœa and enteritis, which had steadily declined from 769 to 187 in the six preceding weeks, further fell to 149 last week; and included 45 in London, 10 in Birmingham, 10 in Liverpool, 10 in Manchester, 5 in West Ham, and 5 in Sheffield. The deaths referred to diphtheria, which had been 51, 46, and 63 in the three preceding weeks, further rose last week to 76, which was the highest number recorded in any week of the current year; of these 76 deaths, 10 occurred in London, 4 in Birmingham, 4 in Manchester, and 3 each in Brighton, Portsmouth, Liverpool, Blackburn, Halifax, Leeds, and Sheffield. The fatal cases of measles, which had been 49, 30, and 43 in the three preceding weeks, further rose to 50 last week, and included 5 in Sheffield, 4 in London, 4 in Middlesbrough, and 3 each in Stoke-on-Trent, Stockport, Liverpool, Burnley, and Bradford. The deaths attributed to whooping-cough, which had been 45, 46, and 35 in the three preceding weeks, further declined to 33 last week, of which number 8 were recorded in Birmingham, 8 in Liverpool, 5 in London, 3 in Manchester, and 2 in Gateshead. The deaths referred to scarlet fever, which had increased from 16 to 36 in the five preceding weeks, fell to 32 last week, and included 6 in Sheffield, 3 in London, 3 in Liverpool, and 2 each in Portsmouth, Birmingham, and Stockton-on-Tees. The fatal cases of enteric fever, which had been 18, 18, and 16 in the three preceding weeks, rose to 21 last week; 3 deaths were registered in Manchester, and 2 each in London, Birmingham, and Liverpool.

The number of scarlet fever patients under treatment in the Metropolitan Asylums and the London Fever Hospitals, which had steadily risen from 2112 to 3896 in the eleven preceding weeks, had further increased to 3980 on Saturday last; 558 new cases were admitted during the week, against 534, 619, and 597 in the three preceding weeks. These hospitals also contained on Saturday last 1237 cases of diphtheria, 162 of whooping-cough, 75 of enteric fever, and 66 of measles, but not one of small-pox. The 1169 deaths from all causes in London were 10 in excess of the number in the previous week, and corresponded to an annual death-rate of 13·5 per 1000. The deaths referred to diseases of the respiratory system, which had been 207, 205, and 206 in the three preceding weeks, rose to 214 last week, but were 69 below the number recorded in the corresponding week of last year.

Of the 4594 deaths from all causes in the 96 towns, 163 were attributed to different forms of violence, and 362 were the subject of coroners' inquests. The causes of 44, or 1·0 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in Manchester, Leeds, Bristol, West Ham, Bradford, Hull, and in 74 other smaller towns. Of the 44 uncertified causes of death, 11 were recorded in Birmingham, 11 in Liverpool, 3 in Stoke-on-Trent, 3 in Southport, and 2 each in London, West Bromwich, St. Helens, and South Shields.

## HEALTH OF SCOTCH TOWNS.

In the 16 largest Scotch towns with an aggregate population estimated at 2,259,600 persons at the middle of this year, 1016 births and 685 deaths were registered during the week ended Saturday, Nov. 22nd. The annual rate of mortality in these towns, which had been 14·7, 14·0, and 16·2 per 1000 in the three preceding weeks, declined to 15·8 per 1000 in the week under notice. During the first eight weeks of the current quarter the mean annual death-rate in these towns averaged 14·7, against 13·6 per 1000 in the 96 large English towns. Among the several Scotch towns the death-rate last week ranged from 4·5 in Kilmarnock, 6·8 in Hamilton, and 7·3 in Falkirk, to 18·1 in Greenock, 21·4 in Leith, and 21·6 in Coatbridge.

The 685 deaths from all causes were 16 fewer than the number in the previous week, and included 68 which were referred to the principal epidemic diseases, against 55 and 84 in the two preceding weeks. Of these 68 deaths, 33 resulted from measles, 14 from infantile diarrhœal diseases, 10 from diphtheria, 6 from scarlet fever, and 5 from whooping-cough, but not one from enteric fever or from small-pox. These 68 deaths from the principal epidemic diseases were equal to an annual death-rate of 1·6, against 1·1 per 1000 in the 96 large English towns. The deaths attributed to measles, which had been 17, 11, and 36 in the three preceding weeks, fell to 33 last week; of this number 22 were registered in Glasgow, 2 in Edinburgh, 2 in Greenock, and 2 in Coatbridge. The deaths of infants (under 2 years of age) referred to diarrhœa and enteritis, which had been 34, 19, and 21 in the three preceding weeks, fell to 14 last week, and comprised 12 in Glasgow and 2 in Dundee. The fatal cases of diphtheria, which had been 11, 11, and 10 in the three preceding weeks, were again 10 last week, and comprised 6 in Glasgow, 3 in Aberdeen, and 1 in Ayr. The deaths attributed to scarlet fever, which had been 14, 10, and 9 in the three preceding weeks, further declined to 6 last week, of which 4 were registered in Glasgow. The 5 fatal cases of whooping-cough, which were all recorded in Glasgow, were slightly in excess of the average in the earlier weeks of the quarter.

The deaths referred to diseases of the respiratory system, which had been 99, 84, and 97 in the three preceding weeks, further rose to 119 in the week under notice; 30 deaths resulted from various forms of violence, against 29 and 24 in the two preceding weeks.

## HEALTH OF IRISH TOWNS.

In the 27 town districts of Ireland with an aggregate population estimated at 1,199,180 persons at the middle of this year, 520 births and 378 deaths were registered during the week ended Saturday, Nov. 22nd. The annual rate of mortality in these towns, which had been 17·2, 17·6, and 18·8 per 1000 in the three preceding weeks, declined to 16·4 per 1000 in the week under notice. During the first eight weeks of the current quarter the mean annual death-rate in these Irish towns averaged 17·4 per 1000; in the 96 large English towns the corresponding rate did not exceed 13·6, while in the 16 Scotch towns it was equal to 14·7 per 1000. The annual death-rate last week was equal to 18·1 in Dublin (against 13·5 in London and 17·5 in Glasgow), 16·6 in Belfast, 10·2 in Cork, 12·7 in Londonderry, 16·2 in Limerick, and 20·9 in Waterford, while in the 21 remaining smaller towns the mean death-rate did not exceed 15·4 per 1000.

The 378 deaths from all causes were 54 fewer than the number in the previous week, and included 38 which were referred to the principal epidemic diseases, against 34 and 41 in the two preceding weeks. Of these 38 deaths 18 resulted from infantile diarrhœal diseases, 12 from scarlet fever, 3 from whooping-cough, 2 from enteric fever, 2 from measles, and 1 from diphtheria, but not one from small-pox. The mean annual death-rate from these diseases last week was equal to 1·7 per 1000; in the 96 large English towns the corresponding rate did not exceed 1·1, while in the 16 Scotch towns it reached 1·6 per 1000. The deaths of infants (under 2 years of age) attributed to diarrhœa and enteritis, which had steadily declined from 111 to 15 in the ten preceding weeks, rose to 18 last week, and included 9 in Dublin and 6 in Belfast. The deaths referred to scarlet fever, which had been 5, 8, and 7 in the three preceding weeks, rose to 12 last week, of which 9 were registered in Belfast. The 3 fatal cases of whooping-cough, comprising 2 in Belfast and 1 in Lisburn, were slightly below the average in the earlier weeks of the quarter. The 2 deaths referred to enteric fever occurred in Belfast and Ballymena respectively; those to measles in Belfast and Londonderry, and the fatal case of diphtheria in Dublin.

The deaths referred to diseases of the respiratory system, which had increased from 48 to 73 in the five preceding weeks, declined to 68 in the week under notice. Of the 378 deaths from all causes, 117, or 31 per cent., occurred in public institutions, and 16 resulted from various forms of violence. The causes of 12, or 3·2 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; in the 96 large English towns the proportion of uncertified causes of death did not exceed 1·0 per cent.

## VITAL STATISTICS OF LONDON DURING OCTOBER, 1913.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious diseases, it appears

## ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING OCTOBER, 1913.

*(Specially compiled for* THE LANCET.)

| CITIES AND BOROUGHS. | Estimated population in the middle of 1913. | NOTIFIED CASES OF INFECTIOUS DISEASE. | | | | | | | | | | | | DEATHS FROM PRINCIPAL INFECTIOUS DISEASES. | | | | | | | | | Deaths from all causes. | Death-rate per 1000 living.† |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Small-pox. | Scarlet fever. | Diphtheria.* | Typhus fever. | Enteric fever. | Other continued fevers. | Puerperal fever. | Erysipelas. | Cerebro-spinal meningitis. | Poliomyelitis. | Total. | Annual rate per 1000 persons living. | Small-pox. | Measles. | Scarlet fever. | Diphtheria.* | Whooping-cough. | Enteric fever. | Diarrhœa and enteritis (under 2 years). | Total. | Annual rate per 1000 persons living. | | |
| **LONDON** | **4,518,191** | — | **2900** | **956** | — | **113** | **1** | **25** | **498** | **7** | **26** | **4526** | **10·4** | — | **19** | **13** | **48** | **36** | **16** | **667** | **799** | **1·8** | **5957** | **13·7** |
| *West Districts.* | | | | | | | | | | | | | | | | | | | | | | | | |
| Paddington | 142,210 | — | 87 | 42 | — | 1 | — | 3 | 13 | — | 1 | 147 | 10·8 | — | — | — | — | — | 1 | 15 | 16 | 1·2 | 160 | 11·6 |
| Kensington | 171,284 | — | 88 | 15 | — | 7 | — | — | 10 | — | 1 | 121 | 7·4 | — | — | — | 1 | — | — | 15 | 16 | 1·0 | 203 | 12·3 |
| Hammersmith | 123,745 | — | 70 | 19 | — | 4 | — | 1 | 14 | — | — | 108 | 9·1 | — | — | — | 2 | 1 | — | 15 | 18 | 1·5 | 151 | 12·6 |
| Fulham | 157,117 | — | 116 | 45 | — | 7 | — | 1 | 5 | — | — | 174 | 11·6 | — | 1 | — | 3 | — | 4 | 24 | 32 | 2·1 | 201 | 13·8 |
| Chelsea | 64,598 | — | 31 | 12 | — | 1 | — | 1 | 4 | — | 1 | 50 | 8·1 | — | — | — | — | — | — | 4 | 4 | 0·6 | 99 | 15·2 |
| City of Westminster | 154,810 | — | 50 | 21 | — | 5 | — | — | 6 | — | 2 | 84 | 5·7 | — | — | — | — | — | — | 7 | 7 | 0·5 | 146 | 10·3 |
| *North Districts.* | | | | | | | | | | | | | | | | | | | | | | | | |
| St. Marylebone | 114,532 | — | 71 | 16 | — | 3 | — | 1 | 10 | — | 1 | 102 | 9·3 | — | — | 3 | — | 1 | 1 | 8 | 13 | 1·2 | 138 | 12·8 |
| Hampstead | 86,346 | — | 30 | 18 | — | 3 | — | — | 4 | — | 1 | 56 | 6·8 | — | — | — | — | 2 | — | 4 | 6 | 0·7 | 87 | 11·1 |
| St. Pancras | 214,330 | — | 69 | 54 | — | 8 | — | — | 40 | 2 | — | 173 | 8·4 | — | 1 | — | — | 1 | 2 | 21 | 25 | 1·2 | 292 | 14·2 |
| Islington | 325,585 | — | 246 | 66 | — | 7 | — | 1 | 33 | — | 5 | 358 | 11·5 | — | — | 1 | 4 | 2 | — | 44 | 51 | 1·6 | 430 | 13·5 |
| Stoke Newington | 50,518 | — | 24 | 8 | — | 3 | — | 1 | 6 | — | — | 42 | 8·7 | — | — | — | 1 | — | 1 | 5 | 7 | 1·4 | 62 | 12·2 |
| Hackney | 223,353 | — | 165 | 57 | — | 10 | — | 1 | 23 | 1 | 1 | 258 | 12·0 | — | — | 1 | 1 | 1 | 1 | 42 | 46 | 2·1 | 284 | 13·4 |
| *Central Districts.* | | | | | | | | | | | | | | | | | | | | | | | | |
| Holborn | 46,949 | — | 30 | 3 | — | — | — | 1 | 5 | — | 1 | 40 | 8·9 | — | — | — | — | — | — | 2 | 2 | 0·4 | 62 | 13·8 |
| Finsbury | 84,679 | — | 42 | 11 | — | 2 | — | — | 19 | — | — | 74 | 9·1 | — | — | — | 1 | 6 | — | 16 | 23 | 2·8 | 138 | 16·8 |
| City of London | 17,916 | — | 5 | 1 | — | — | — | — | 1 | — | — | 7 | 4·1 | — | — | — | — | 1 | — | 1 | 2 | 1·2 | 29 | 17·6 |
| *East Districts.* | | | | | | | | | | | | | | | | | | | | | | | | |
| Shoreditch | 109,654 | — | 92 | 20 | — | 1 | — | 1 | 20 | 1 | 1 | 136 | 12·9 | — | 1 | — | 3 | 4 | — | 54 | 62 | 5·9 | 224 | 22·0 |
| Bethnal Green | 127,824 | — | 99 | 28 | — | 2 | — | 2 | 30 | — | 1 | 162 | 13·2 | — | 1 | — | 2 | 3 | — | 33 | 39 | 3·2 | 187 | 15·9 |
| Stepney | 275,300 | — | 137 | 56 | — | 5 | — | 1 | 49 | — | 2 | 250 | 9·5 | — | 2 | 1 | 2 | 3 | 1 | 59 | 68 | 2·6 | 384 | 15·1 |
| Poplar | 160,913 | — | 126 | 51 | — | 7 | — | 2 | 16 | 1 | — | 203 | 13·2 | — | 1 | 1 | 4 | 2 | 1 | 27 | 36 | 2·3 | 242 | 15·5 |
| *South Districts.* | | | | | | | | | | | | | | | | | | | | | | | | |
| Southwark | 188,487 | — | 174 | 29 | — | 6 | — | — | 32 | — | — | 241 | 13·3 | — | 1 | 2 | 4 | 3 | — | 45 | 55 | 3·0 | 324 | 18·0 |
| Bermondsey | 124,739 | — | 125 | 30 | — | 1 | — | 2 | 20 | — | — | 178 | 14·9 | — | 1 | — | 2 | — | — | 32 | 35 | 2·9 | 207 | 17·3 |
| Lambeth | 297,139 | — | 217 | 41 | — | 6 | 1 | 1 | 29 | 1 | 1 | 297 | 10·4 | — | 1 | 1 | 4 | 1 | — | 40 | 47 | 1·6 | 423 | 14·5 |
| Battersea | 167,464 | — | 87 | 59 | — | 2 | — | 1 | 13 | — | 1 | 163 | 10·2 | — | — | — | 2 | 1 | 2 | 24 | 29 | 1·8 | 194 | 12·2 |
| Wandsworth | 330,395 | — | 153 | 51 | — | 9 | — | 2 | 8 | — | 4 | 227 | 7·2 | — | 1 | — | 1 | 1 | — | 23 | 26 | 0·8 | 279 | 8·8 |
| Camberwell | 261,805 | — | 191 | 56 | — | 2 | — | 1 | 29 | 1 | 1 | 281 | 11·2 | — | 3 | 2 | 1 | 2 | 1 | 46 | 55 | 2·2 | 375 | 14·7 |
| Deptford | 109,280 | — | 98 | 42 | — | 3 | — | — | 30 | — | — | 173 | 16·5 | — | 5 | — | 1 | 1 | — | 30 | 37 | 3·5 | 171 | 16·1 |
| Greenwich | 96,015 | — | 62 | 33 | — | 1 | — | — | 9 | — | — | 105 | 11·4 | — | — | 1 | 1 | — | — | 17 | 19 | 2·1 | 139 | 14·9 |
| Lewisham | 168,822 | — | 96 | 39 | — | 4 | — | — | 14 | — | 1 | 154 | 9·5 | — | — | — | 6 | — | 1 | 9 | 16 | 1·0 | 166 | 10·1 |
| Woolwich | 122,382 | — | 119 | 33 | — | 1 | — | 1 | 5 | — | — | 159 | 13·5 | — | — | — | 2 | — | — | 5 | 7 | 0·6 | 160 | 13·9 |
| Port of London | — | — | — | — | — | 2 | — | — | 1 | — | — | 3 | — | — | — | — | — | — | — | — | — | — | — | — |

* Including membranous croup. † The death-rates are corrected for variations in sex- and age-constitution of the populations of the several boroughs, the population of England and Wales being taken as the standard.

that the number of persons reported to be suffering from one or other of the ten diseases specified in the table was equal to an annual rate of 10·4 per 1000 of the population, estimated at 4,518,191 persons in the middle of the year; in the three preceding months the rates were 6·6, 5·4, and 7·7 per 1000 respectively. The lowest rates last month were recorded in Kensington, the City of Westminster, Hampstead, the City of London, and Wandsworth; and the highest rates in Shoreditch, Bethnal Green, Poplar, Southwark, Bermondsey, Deptford, and Woolwich. The prevalence of scarlet fever showed a marked increase over that recorded in any previous month of this year; this disease was proportionally most prevalent in Shoreditch, Bethnal Green, Poplar, Southwark, Bermondsey, Deptford, and Woolwich. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals at the end of last month was 3517, against 2093 and 2552 at the end of the two preceding months; the weekly admissions averaged 512, against 258 and 402 in the two preceding months. Diphtheria also was much more prevalent than in other recent months; the greatest proportional prevalence of this disease was recorded in Paddington, Fulham, Poplar, Battersea, Deptford, and Greenwich. There were 1190 diphtheria patients under treatment in the Metropolitan Asylums Hospitals at the end of last month, against 798 and 909 at the end of the two preceding months; the weekly admissions averaged 184, against 99 and 147 in the two preceding months. The prevalence of enteric fever showed a slight increase over that in the previous month; this disease was proportionally most prevalent last month in Kensington, Fulham, Stoke Newington, Hackney, and Poplar. The Metropolitan Asylums Hospitals contained 77 enteric fever patients at the end of last month, against 37 and 56 at the end of the two preceding months; the weekly admissions averaged 12, against 6 and 11 in the two preceding months. Erysipelas was proportionally most prevalent in St. Pancras, Fulham, Shoreditch, Bethnal Green, Stepney, Southwark, Bermondsey, and Deptford. The 25 cases of puerperal fever notified during the month included 3 in Paddington, and 2 each in Bethnal Green, Poplar, Bermondsey, and Wandsworth. The 7 cases of cerebro-spinal meningitis included 2 in St. Pancras, and the 26 cases of poliomyelitis included 5 in Islington, 4 in Wandsworth, 2 in the City of Westminster, and 2 in Stepney.

The mortality statistics in the table relate to the deaths of persons actually belonging to the several boroughs, the deaths occurring in institutions having been distributed among the boroughs in which the deceased persons had previously resided; the death-rates from all causes are further corrected for variations in the sex- and age-constitution of the several boroughs. During the five weeks ending Nov. 1st the deaths of 5957 London residents were registered, equal to an annual rate of 13·7 per 1000; in the three preceding months the rates had been 10·6, 11·8, and 13·3 per 1000 respectively. The death-rates last month ranged from 10·1 in Lewisham, 10·3 in the City of Westminster, 11·1 in Hampstead, 11·6 in Paddington, 12·2 in Stoke Newington and in Battersea, and 12·3 in Kensington, to 15·9 in Bethnal Green, 16·1 in Deptford, 16·8 in Finsbury, 17·3 in Bermondsey, 17·6 in the City of London, 18·0 in Southwark, and 22·0 in Shoreditch. The 5957 deaths from all causes included 799 which were referred to the principal infectious diseases; of these, 19 resulted from measles, 13 from scarlet fever, 48 from diphtheria, 36 from whooping-cough, 16 from enteric fever, and 667 from diarrhœa and enteritis among children under two years of age. The lowest death-rates from these diseases were recorded last month in Chelsea, the City of Westminster, Hampstead, Holborn, Wandsworth, and Woolwich; and the highest rates in Finsbury, Shoreditch, Bethnal Green, Stepney, Poplar, Southwark, Bermondsey, and Deptford. The 19 fatal cases of measles were 88 fewer than the corrected average number in the corresponding period of the five preceding years; of these 19 cases, 5 belonged to Deptford, 3 to Camberwell, and 2 to Stepney. The 13 deaths from scarlet fever were 14 below the corrected average number, and included 3 in St. Marylebone, 2 in Southwark, and 2 in Camberwell. The 48 fatal cases of diphtheria showed a decline of 5 from the corrected average number; this disease was proportionally most fatal in Hammersmith, Fulham, Shoreditch, Poplar, Southwark, Bermondsey, Lewisham, and Woolwich. The 36 deaths from whooping-cough were 6 below the corrected average; the highest death-rates from this disease were recorded in Hampstead, Finsbury, Shoreditch, Bethnal Green, Stepney, Poplar, and Southwark. The 16 deaths from enteric fever were equal to half the corrected average number, and included 4 in Fulham, 2 in St. Pancras, and 2 in Battersea. The mortality from diarrhœa and enteritis among children under two years of age was proportionally greatest in Hackney, Finsbury, Shoreditch, Bethnal Green, Stepney, Southwark, Bermondsey, and Deptford. In conclusion, it may be stated that the aggregate mortality in London last month from the principal infectious diseases, excluding diarrhœa, was 49·4 per cent. below the average.

# THE SERVICES.

## ROYAL NAVY MEDICAL SERVICE.

IN accordance with the provisions of His late Majesty's Order in Council of August 11th, 1903, Surgeon John Parton Berry has been allowed to withdraw from His Majesty's Naval Service with a gratuity (dated Nov. 20th, 1913).

The following appointment has been notified:—Staff-Surgeon: M. Cameron to the *President*, additional, for Deptford Yard, temporary.

## ROYAL ARMY MEDICAL CORPS.

Major Frederick J. W. Porter, D.S.O., retires on retired pay (dated Nov. 22nd, 1913).

The undermentioned Lieutenants are confirmed in their rank:—Robert G. Shaw, Alexander L. Urquhart, and Avenell F. C. Martyn.

Surgeon-General T. M. Corker has been appointed Deputy Director of Medical Services to the Ninth (Secunderabad) Division. Lieutenant-Colonel N. Manders has been placed under orders to embark for a tour of service in Egypt. Lieutenant-Colonel C. W. R. Healey has been selected for appointment as Medical Inspector of Recruits to the London area. Lieutenant-Colonel A. T. J. Lilly has been selected for appointment as Senior Medical Officer at Colaba, Bombay. Lieutenant-Colonel M. O'D. Braddell has taken up duty in the Cork District. Lieutenant-Colonel C. H. Hale, D.S.O., has been granted leave of absence home from Burma for six months. Lieutenant-Colonel G. A. T. Bray has been placed under orders for a tour of service in India, and will be appointed to the Meerut Division. Lieutenant-Colonel C. A. Young has taken up duty as Deputy Assistant Director of Medical Services to the Welsh Division. Lieutenant-Colonel S. C. Philson has been appointed to hold charge of the Military Hospital at Bareilly Cantonment.

Major F. J. Brakenridge has been selected for appointment as Instructor in Royal Army Medical Corps duties to the Oxford University Contingent of the Officers' Training Corps. Major N. J. C. Rutherford has taken up duty as Specialist Sanitary Officer to the Cork District. Major J. Dorgan has left the Cork District for a tour of service at the Military Hospital, Hong-Kong. Major J. Baillie has taken up duty at the Military Hospital, Colchester. Major W. M. Power has been appointed to the Military Hospital at Chatham for duty. Major H. A. Davidson has taken up duty at the Military Hospital, Singapore. Major W. M. B. Sparkes has embarked for a tour of duty in the Sierra Leone Protectorate, West Africa. Major R. L. Argles has been appointed for a tour of service in India. Major M. C. Beatty has been appointed to the Military Hospital at Devonport for duty. Major A. W. A. Irwin has been appointed to the Military Hospital at Cork. Major F. W. Begbie, specialist in operative surgery to the Mhow Division of the Southern Army in India, has been selected for advancement to the rank of Lieutenant-Colonel in succession to Lieutenant-Colonel H. N. Thompson, D.S.O., promoted.

Captain L. Cotterill has been appointed to the Peshawar Division of the Northern Army in India for duty. Captain J. J. O'Keefe has been appointed to the Eastern Command. Captain M. C. Wetherell has been transferred from the Military Hospital at Dublin to Kildare. Captain W. McD. MacDowall has embarked for a tour of service in the Sierra Leone Protectorate. Captain C. W. Bowle has been appointed for medical duty on board the transport s.s. *Rewa*, which leaves Bombay on Dec. 10th. Captain E. M. Pennefather has been appointed for duty with the Lahore Division of the Northern Army in India. Captain F. M. M. Ommanney has been transferred from the Belfast District to the Military Hospital at Armagh. Captain W. F. H. Vaughan has left Cork for a tour of service in Malta. Captain H. St. M. Carter has taken up duty as Specialist in Operative Surgery at the Royal Victoria Hospital, Netley. Captain B. A. Craig has joined at Newcastle. Captain J. M. H. Conway has been appointed Adjutant of the Royal Army Medical Corps School of Instruction at Leeds. Captain A. H. Bond has joined at Limerick. Captain H. C. Winkworth has been appointed for duty with the Quetta Division of the Southern Army in India. Captain N. Low has been transferred from the Military Hospital at Cosham to Portsmouth. Captain F. A. H. Clarke has been appointed Specialist in the Prevention of Disease and placed in charge of the Bacteriological Research Laboratory at Brigade Headquarters, Darjeeling. Captain A. T. Frost, Specialist in Dermatology and Venereal Diseases, has taken up duty in India. Captain G. A. D. Harvey has been selected for appointment as Specialist in Physical Training at the Royal Army Medical College. Captain T. S. Eves has joined at Lucknow. Captain A. C. H. Gray has been appointed for duty with the Secunderabad Division of the Southern Army in India. Captain J. St. A. Maughan has been transferred from the Royal Army Medical Corps Training Camp at Tidworth Park, Salisbury Plain, to the Royal Victoria Hospital at Netley. Captain J. A. Turnbull has taken up

duty in India on transfer from the Military Hospital at Tidworth, Salisbury Plain. Captain A. H. Heslop has taken up duty at the Military Hospital, Rawal Pindi Cantonment. Captain W. R. Galwey has taken up duty as Deputy Assistant Director of Medical Services (Sanitary) at Wellington. Captain T. C. C. Leslie has been appointed for duty with the Lucknow Division of the Northern Army in India. Captain J. E. Hoar has been transferred from the Military Hospital at Chatham to Sheerness. Captain G. W. Heron has joined the Public Health Department in Egypt. Captain H. R. Edwards has taken up duty at Pretoria. Captain R. G. Meredith has embarked for a tour of service in Ceylon. Captain R. E. Humfrey has been transferred from the Military Hospital at Queenstown to Kilworth. Captain J. B. Grogan has taken up duty at the Military Hospital, Cosham. Captain J. H. Gurley has joined the Royal Victoria Hospital at Netley.

Lieutenant A. Hood, Lieutenant J. M. Elliott, Lieutenant H. J. Wells, and Lieutenant W. W. Pratt have been placed under orders to embark for a tour of service with the Northern Army in India. Lieutenant A. L. Urquhart has been appointed to the Pathological Department of the Royal Army Medical College. Lieutenant J. C. Sproule has been transferred from the Military Hospital at Plymouth to Crownhill for duty.

### INDIAN MEDICAL SERVICE.

Lieutenant-Colonel S. H. Burnett has been selected for appointment as First District Physician on the staff of St. George's Hospital at Bombay. Lieutenant-Colonel W. R. Clarke has joined at Jullundur as Civil Surgeon. The services of Lieutenant-Colonel H. W. Pilgrim have been placed at the disposal of the Commander-in-Chief by the Home Department of the Government of India. Lieutenant-Colonel D. M. Davidson has joined at Lahore.

Major H. R. Nutt has been selected for appointment as Civil Surgeon at Muttra. Major W. D. A. Keys has been granted an extension of leave of absence home from India for two months on medical certificate. Major J. H. Hugo, D.S.O., has been selected for appointment as Agency Surgeon (second class) at Baghelkhand. The services of Major R. B. B. Foster have been placed permanently at the disposal of the Administration of Madras Presidency. Major T. D. A. Hunter has been granted an extension of leave of absence home from India. Major V. B. Bennett has been appointed Civil Surgeon of the First Class at Bombay. Major T. S. Novis has been appointed Professor of Clinical and Operative Surgery at the Grant Medical College, Bombay.

Captain G. Holroyd has been appointed temporarily to the Jail Department in Bengal Presidency. Captain C. H. Cross has been appointed to be a Probationer in the Chemical Examiners' Department and has been attached to the Chemical Examiners' Laboratory at Madras. The services of Captain H. R. Dutton have been placed at the disposal of the Government of Bengal Presidency. Captain B. E. M. Newland has joined at Etawah. Captain L. Reynolds has been granted an extension of leave of absence home from India. Captain J. F. Boyd has been appointed to the United Provinces of Agra and Oudh in connexion with plague prevention. Captain M. R. S. Macwatters has been appointed to officiate as Chemical Examiner to the Central Provinces. Captain F. H. Salisbury, superintendent of the Dacca Central Jail, has been granted six months' leave of absence home from India. Captain H. C. Keates has been appointed to officiate as Civil Surgeon at Campbellpore. Captain N. M. Wilson has been appointed to officiate as Civil Surgeon at Dera Ghazi Khan. Captain P. S. Mills has been granted combined leave of absence for six months home from India.

### TERRITORIAL FORCE.

1st Lowland Brigade, Royal Field Artillery.—Surgeon-Captain (Honorary Lieutenant in the Army) William M. Taylor to be Surgeon-Major (dated Sept. 13th, 1913).

*Royal Army Medical Corps.*

*Attached to Units other than Medical Units.*—Ernest White to be Lieutenant (dated Oct. 14th, 1913).

### THE HEALTH OF THE NAVY.

The statistical report of the health of the Navy for the year 1912 has just been issued by the Admiralty.[1] Surgeon-General Arthur W. May, the Director-General of the Medical Department of the Navy, in his introduction, dated Oct. 14th, 1913, states that the returns for the total force for the year under review show a continuous improvement in the general health of the Fleet as compared with the preceding five years. The total force in 1912 was 119,540, and the total number of cases of disease and injury entered on the sick list was 76,815, giving a ratio of 642·58 per 1000, a decrease of 24·1 as compared with the average ratio for the previous five years. The total recorded number of cases of venereal disease is 12,667, which gives the substantial decrease of 13·85 per 1000 in the case ratio as compared with the averages for the previous five years.

[1] To be purchased from Wyman and Sons, Limited, Fetter-lane, E.C. Price 10½d.

## MEDICAL PRACTICE UNDER THE INSURANCE ACT.

(BY OUR SPECIAL COMMISSIONER.)

(*Continued from p. 1498.*)

### XXVIII.—BIRMINGHAM: FAILURE AND SUCCESS IN WORKING THE ACT.

MOST Insurance Committees profess to be well satisfied with themselves and with the work which they have done, and Birmingham can show cause for this spirit. It boasts of a large panel to the number of 260. As there are now 308,000 insured persons, this gives an average list of 1180 persons for each medical man on the panel. Further, it is maintained that all the insurance areas are well served, and accordingly there should be a fairly even distribution of the patients. This, however, is not the case, as no less than 36 practitioners have more than 2000 insured persons on their lists, and there is one list which exceeds 4000. Of course, there are exceptional reasons for such figures. Thus there are large families all on the same list, and such families are grouped together. Thousands of persons living in a very restricted area are much easier to attend, and so an apparently impossible amount of work may be achieved more or less. Of course, in such circumstances cases cannot have sufficient time allotted to them, but formal complaints in this direction have rarely been received from the patients. It must be remarked that many insured patients as yet do not know how to complain or realise that they have a right to do so. Nevertheless, several complaints have reached the Insurance Committee and have been transmitted to the Medical Subcommittee, but only in two cases was it necessary to call upon the practitioners to answer the charges.

The medical men on the panel, I was assured, work harmoniously together. By mutual arrangement they overcome difficulties, especially that of overlapping into each other's areas. Then there is one difficulty which the Insurance Committee have solved, and in so doing have set an example that might with advantage be widely followed. This relates to what may be termed "the emergency prescription." A patient is seen when the chemists' shops are closed—in the night, for instance. The quickest way to deal with the situation would be for the medical man himself to dispense the medicine; but if he does so he has no right to make any charge—the medicine he gives must be a free gift. Now the Birmingham Insurance Committee have decided to allow the panel practitioners 1s. extra per annum for each insured person. With 1000 persons on a panel list the £50 a year so received may be considered ample to pay for dispensing drugs on occasions when the chemists' shops are shut or when they cannot be reached in time to meet an emergency.

At Newcastle-on-Tyne something similar in spirit has been done. There the Insurance Committee have sent to all the practitioners on the panel an emergency packet of lint, bandages, and other necessaries for first aid. Unless some such arrangement is made, when a patient comes with a cut finger the medical man must either make him a present of a bandage or send him with the undressed wound to fetch the required dressing from a panel chemist. Such a contingency is now

avoided at Newcastle-on-Tyne by the provision of dressings, and at Birmingham by the allowance of 1s. a year. I mention the matter in detail because although the point is a small one, what has happened shows that a determination on the part of the public to smooth away difficulties exists and is growing.

*The Attempt to Resist the Act.*

But in spite of the roseate view taken by the Insurance Committee, a strong stand against the Act was made at Birmingham, the majority of the profession opposing it to the very end; those who held an official position were specially antagonistic. Resolutions were adopted at numerous meetings to the effect that the members of the profession had better refrain from having anything to do with the Act; finally, however, the proposed resistance collapsed. When the contract form was sent out and it became clear that the practitioners would be refusing to work for the Government, they took a serious view of the consequences. No resolution was passed allowing them to go on the panel or absolving them from any pledges, but they nevertheless nearly all yielded to the pressure. The British Medical Association, which organised the resistance, held many meetings to which all practitioners were invited, whether they belonged to the Association or not, yet but few attended outside the membership of the Association.

A General Practitioners' Union was formed at Birmingham which divided up the city into wards, each ward having a chairman and a small committee, with a general secretary to unite all the wards. Ward meetings were held to test the local feeling, and then it was ascertained that in every district there were practitioners who were determined to go on the panel whatever happened. It really seems as if small local meetings give a truer insight into the feelings of the whole profession than does a large central meeting. The latter is apt to be dominated by partisans of one cause or another and may not represent the whole community. It was these small ward meetings that practically decided what was to be done, for it was shown that many practitioners were entirely dependent on club practice, having no private patients at all. On the clubs giving up the medical aid branch of their work the panel was the only opening remaining for these practitioners. Then other practitioners, though in a much more independent position, followed suit, for a partial resistance would have been worse than useless.

In all Birmingham, of the available general practitioners there are probably not more than 20 who have not joined the panel.

*The Degradation of Medical Practice.*

I have mentioned that one practitioner in Birmingham has more than 4000 panel patients on his list, but he has a partner or assistant to help him. Another medical man, however, has nearly as many patients on his list, but has no one to help him, so he is obliged to work night and day. These are the things which make one see that the working of the Act has need of amendment.

Speaking about the over-large panel list with one of the leading practitioners, he maintained that the medical attendance given to the poor and the working classes is not so good as it was in the old club days, nor is the work any more pleasant or scientific. The general custom then was to go to the club doctor for minor ailments, and to go to the hospital or to some institution if the illness was serious. The medical officer of a club who was paid 4s. a year only attended a small portion of the sick members. Now he obtains, under the Insurance Act, 7s. a year, but he has to attend to every person on his list without the same chances of delegation which he used to possess. The payment is larger, but much more work has to be done for it. Many patients whom a club doctor used to send to the hospital are now sent back to him. The result has been in some cases that instead of a wound being dressed by the practitioner, the dressing has been given to the patient, who dresses his own wound unskilfully. Insured patients sometimes present themselves at the dispensaries because they are dissatisfied with their panel practitioner, and this sort of thing is bound to occur if panel practice is allowed to fall to a low level. If these complaints are heard to-day, what will happen in the event of an epidemic? That is the question that is asked anxiously in all places where the medical administration is under criticism.

There is evidence to show that a good many insured patients are dissatisfied, the result being that they will not call on their panel practitioner, though they are entitled to receive his advice without payment; instead, they seek other advice, for which they pay the ordinary fee. A panel medical man who was speaking to me about this said that he had just seen a patient who had first gone to his panel practitioner, who sometimes receives nearly 100 patients in one evening. What could be expected? The patient wanted to have his chest examined, and of course there was not the time for this to be done. Thereupon he came to my informant and paid a full fee to be properly examined.

In another case, after having given a certificate for several weeks running, and as the patient seemed quite well, my informant refused to sign any more. The patient then went to the Insurance Committee and asked for a transfer form. Though it was not the proper time for this, and though the practitioner had informed the clerk of the committee that he had refused a certificate, the request of the applicant was allowed. He then obtained from the second panel practitioner the certificate which had been refused. The second practitioner ought, if possible, and if the circumstances were known to him, to have supported the first medical man and refused the certificate. As it is it may be argued that a refusal to give a certificate will not stop malingering but will result in the loss of a patient. In order to check malingering the profession must stand together.

*The Approved Institutes.*

Birmingham is fortunate in having only two approved institutes of any importance, and even these, for so populous a centre, are very small. The largest is known as the Dale End Dispensary, and it is in reality an amalgamation of Friendly Societies. Among the members there are about 2000 insured persons, and those whom I was able to question laughed when I inquired if the whole-time medical officer received the full 7s. for each insured member. There are also the Hockley Provident Dispensary and a medical aid institution connected with the Cornwall Works, where the workpeople and their families are enrolled. Two medical men are employed and receive regular salaries. The competition of these institutions against the panel practitioners and chemists is, of course, recognised as utterly wrong in principle,

but is so slightly felt that it does not constitute here an urgent and acute grievance, as is the case at Derby and Chesterfield.

The question of women workers is likewise not quite as prominent as at Nottingham and Derby, but it tells very decidedly on the Birmingham practitioner. Thus a prominent practitioner related to me that his list of insured persons contained an equal number of men and women, yet out of 125 patients calling at his surgery 75 were women. He found also that of those in receipt of sick pay there were two women for every man, while in the club days before the Act there were hardly any women insured.

*Sick Pay Delays.*

A good deal of trouble had occurred in regard to sick pay. The wording of the Act complicated matters. Is an insured person to receive sick pay because he is unable to work or because he is unable to follow his usual occupation? At Birmingham the practice is that a patient should be unable to do any work whatsoever. Thus a woman worker in a factory, who is too ill and weak to do work requiring much muscular effort, will have her sick allowance stopped if she is seen laying a tablecloth. It is urged that in the old days a sick person in receipt of benefits from his club was allowed to put coal on the fire without losing his sick pay.

The commercial insurance companies, attending to a large part of the insurance work under the Act, are far too ready to raise legal quibbles. They suspend payments to make inquiries, so that articles have to be pawned to provide food—precisely the sort of evil the Act was specially devised to prevent. Thus, a case was related to me of a youth, aged 18, who was accidentally shot in the leg during the 5th of November celebrations in 1912, before the Act came into force. A piece of clothing was left in the wound and a running sore ensued, and when the measure came into force he consulted my informant who was his panel practitioner. As the certificate given stated that the patient had a wound in the leg the insurance company refused sick allowance on the ground that a wound came under the Employers' Liability Act. But the accident happened when he was at play. Then the company replied that the patient should take action against the father of the boy who accidentally let off the gun. Considering that this all happened among people far too poor to take legal action the absurdity of the position was evident. Ultimately the patient obtained his sick pay, but he had to wait many weeks, to say nothing of long and vexatious negotiations. Another patient could not get sick pay because the company through which he was insured maintained that a cold was not an illness, however severe.

Both the Insurance Companies and the Friendly Societies are now employing, in order to detect malingering, a great number of visitors, especially women. The difficulty is that these will not content themselves with visiting, but insist on giving advice. Thus, and in spite of their incompetence, they constantly interfere with the medical treatment. As an example, I was told of a case in which a young girl had had three attacks of rheumatic fever. The patient had been several months in bed, but at last she was well enough to get up and sit at the door. Thereupon the sick visitor told her she should take exercise, as nothing was more wholesome than exercise. But the patient's heart was in a precarious condition, and after a ten minutes' walk she was very much worse. Some measure is needed to prevent visitors exceeding their authority and dangerously interfering with medical treatment.

*The Good Working of the Insurance and Medical Committees.*

From the official point of view the Act has been working better in Birmingham than in most places. The Government, it is urged, may consider themselves very fortunate that the insurance scheme did not start with an epidemic. Had a bad epidemic occurred last winter it might have imperilled the Act, and even this winter it would cause a terrible strain on the provisions of the measure. On the other hand, it is argued that, though there was no epidemic last winter, there was a great deal of sickness, and at Birmingham no less than 232,000 insured persons were placed on the lists of the practitioners within the first three months.

There can be no doubt that the Insurance Committee have been very considerate in regard to the medical staff. They have not harassed them by sending numerous instructions, and when difficulties arose they endeavoured to meet the case to the best of their ability. The Insurance Committee have always ascertained the medical men's opinions, and they have generally accepted the advice given by the Medical Committee. This latter committee consists of 23 general practitioners and seven consultants. Of the 23 general practitioners 21 are on the panel, so that the Medical Committee is a fairly representative body, and it exercises a well-merited influence.

(*To be continued.*)

## PLAGUE IN THE NEAR EAST.

(FROM THE BRITISH DELEGATE TO THE CONSTANTINOPLE BOARD OF HEALTH.)

*Plague in Jeddah.*

THE outbreak of plague in Jeddah, referred to in my last letter on this subject,[1] appeared to have come to an end early in May, and the port was declared "clean" on May 13th. But on the 16th of that month a further case was discovered after the death of the patient, and on the 28th a second one was seen. None were discovered later. The outbreak began on March 10th, and had consequently lasted two and a half months, during which 31 cases with 27 deaths were registered.

*Plague in Aden.*

The following figures are in continuation of those furnished in the letter above referred to:—

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Week ending | May | 10th | ... | ... | 9 cases, | 9 | deaths. |
| ,, | ,, | 17th | ... | ... | 14 ,, | 11 | ,, |
| ,, | ,, | 24th | ... | ... | 14 ,, | 10 | ,, |
| ,, | ,, | 31st | ... | ... | 10 ,, | 10 | ,, |
| ,, | June | 7th | ... | ... | 1 case, | 2 | ,, |
| ,, | ,, | 14th | ... | ... | 3 cases, | 1 | death. |

From June 1st to June 25th 8 cases in all, with 5 deaths, are said to have occurred; the last case was isolated on the 22nd. No further cases were reported, and on July 8th the measures imposed in Turkish ports against Aden were suppressed.

*Plague in Massowah.*

About the middle of May the existence of plague was reported from Massowah, where an unusual mortality among rats had also been observed.

[1] THE LANCET, June 14th, p. 1697.

Later information showed that the outbreak began on May 4th with 9 cases, and official reports stated that in successive weeks there had been recorded 23 cases, 10 cases, and 1 case respectively. On the other hand, bills of health of ships arriving at Hodeidah from Massowah about this time showed that between May 1st and 26th 51 cases with 31 deaths had occurred in the latter port. All the cases were said to have occurred among natives. No subsequent cases were reported, and on July 8th the measures imposed in Turkish ports against Massowah were suppressed.

*Plague at Bushire.*

The outbreak of plague in the principal port of the Persian Gulf, which was mentioned in my previous letter, soon came to an end. In the week ending May 17th only 2 new cases with no death were reported, and as no further cases occurred the port was declared plague-free on May 31st.

*Plague in Basra.*

A single case of plague was seen in Basra, near the head of the Persian Gulf, on May 31st; the patient died on June 3rd. A second case was isolated on July 15th, and died on (apparently) the 21st. No subsequent cases were observed.

*Plague in the Interior of Persia.*

But little further information has been received here respecting the outbreak of plague in the Khorassan province of Persia, referred to in my previous letter. At the end of May the Russian Legation in Teheran reported the reappearance of the disease at Kariz, in this province. On July 12th the British Consul-General at Meshed telegraphed that no cases had been seen for a month. But in the meantime the disease had appeared in the Ardilan province, in the neighbourhood of Kermanshah, not far from the Turco-Persian frontier. Rumours of the presence of plague in this district were first heard in the spring months, but no exact information has been received as to the date when the outbreak began. During the summer, however, some further details have become available, and it seems that plague was very severely epidemic in several villages during the winter. A report from Teheran states that four villages in the neighbourhood of Hobi Lans lost nearly all their inhabitants from the disease last winter, and that in seven others, where the infection appeared in April, half the population died from the disease. The mortality down to the middle of August for the whole district was put at between 600 and 700. This figure is probably by no means an exaggerated one, for early in June the governor of Kermanshah telegraphed to Teheran that the epidemic was taking on very serious proportions at Harounabad, Loud, and...Caravadeh, where 150 deaths had occurred. Through the summer the principal centres of the disease appear to have been Harounabad and Djami-Shouran, but a considerable mortality was also reported from Larzangeneh, Mahi-dasht, Zebyri, and other places. At Gever two pneumonic cases were seen in June, but elsewhere, so far as is known, the disease was of the bubonic type. The outbreak seems to have come to an end about the beginning of September, or possibly the end of August. The last case reported from Djami-Shouran occurred on August 28th.

*Plague in Adalia.*

A single case of plague recently occurred at Adalia, on the southern coast of Asia Minor. It will be recalled that sporadic cases of the disease—usually limited to one or two—have been seen here almost every summer for several years past. The present case was first seen on August 29th.

*Plague in the Lebanon.*

A recent telegram from Beirût reports the occurrence of a single case of bubonic plague in the village of Kefershina, in the Lebanon, about two hours' distant from Beirût. The patient was a coal porter working in the docks, and was first seen on Oct. 26th. No light has yet been thrown on the source of infection in this case.

*Plague in a Trebizond Prison.*

Ten cases of bubonic plague recently occurred in the town prison in Trebizond. The cases were first reported on Sept. 29th; one patient had then died and nine were under treatment. No further cases occurred, and here also the reports throw no light on the origin of the infection. It is, however, categorically stated that after full inquiry all possibility of importation of the disease from elsewhere has been excluded; and it is a remarkable fact that the cases have all occurred in the same part of the same prison as the similar cases seen in the summer of 1906. In the month of August of that year, curiously enough, the same number of cases (ten) were treated. They were reported in some detail in my letters to THE LANCET at that period.[2] On that occasion a considerable mortality among the rats of the prison was observed, but in the present outbreak there appears to have been no exceptional rat mortality. No cases have been seen in the general population.

*Plague in the Kirghiz Steppes.*

In recent months plague has been showing considerable activity both in human beings and among the marmots in the steppes of southern Russia. Early in June (Old Style) there appears to have been a widespread epizootic of the disease in the steppes of the Astrakhan government, more particularly in districts where human cases of plague had been seen last year. At the same time—between June 3rd and 9th—9 cases of pneumonic plague, all fatal, occurred in the Kirghiz settlement of Solokhin, in the Tsarevo district of the Astrakhan government. The Russian Plague Commission had already started an energetic campaign against the disease. A central laboratory was established in the steppes; floating hospitals, "observation points," and night refuges were organised at Astrakhan and elsewhere; and medical commissions were sent to the governments of Astrakhan, Ekaterinoslav, and the Don territory, and the not inconsiderable sum of 300,000 roubles (about £30,000) was voted for the cost of this campaign. Professor Zabolotny was placed at the head of the organisation, and among other measures an attempt was made to extirpate the marmot population of the affected districts, but the practical difficulties in the way of complete extirpation seem to have been almost insuperable owing to the habits of these animals. On July 13th (all the dates mentioned in this section are according to the Old Style) the governments of Saratof, Samara, and Stavropol were declared "threatened" with plague.

Between July 2nd and August 6th 6 persons in one family died from bubonic plague at Djamantai-Tubek, in the Talof district, and another death occurred about the same time at Asheouzek, 16 versts away. In August 2 deaths occurred at

[2] THE LANCET, August 26th, p. 525, and Sept. 15th, 1906, p. 746.

Alibek-Kopa, in the Astrakhan government, and a suspected case was seen at Tsaritsyn, on the Volga. Early in September 18 Kirghiz fell ill with pneumonic plague at Tourgen, to the east of Prjevalsk, in the Central Asiatic province of Semiretchinsk. Down to the 22nd of the month 26 cases, all fatal, had been recorded here, and 2 others occurred later.

Two deaths from suspected plague occurred at Takbaskul, in the Talof district of the Astrakhan government, some time in September. A serious outbreak of pneumonic plague has also been recently reported from the village of Novo-petrovsk, in the second district of the Don territory, near the railway station of Liapitohevo (35 versts from the borders of the Astrakhan government). The first cases were seen on Sept. 26th (Oct. 9th); down to Oct. 6th (19th) 21 cases with 14 deaths were registered here, and on the 7th (20th) 4 new cases and 5 deaths were recorded.

The above outbreaks have not been without their toll of deaths among the medical staff sent to cope with them. Thus at the end of June Dr. Theodorof died suddenly, apparently of plague, at Astrakhan, where he had been employed on plague measures. At Novopetrovsk assistant Dr. Chertchouk, who had had under his care the first case of pneumonic plague in that village, developed the disease himself on Sept. 28th (Oct. 11th) and died three days later. On Oct. 5th (18th) his wife showed symptoms of the disease and died on the following day; and also on the 5th (18th) a guard on duty at the plague hospital also developed the disease.

Constantinople, Oct. 30th.

## A SYSTEMATIC CAMPAIGN AGAINST TUBERCULOSIS IN A GERMAN VILLAGE.

(FROM A CORRESPONDENT.)

THE eradication of tuberculosis occupies a prominent place in the sanitary policy of every civilised country, and for this reason considerable interest attaches to the step taken at the initiative of the director of the Grand Ducal Hessian Insurance Bureau, Privy Councillor Dr. Dietz, which has for its aim the systematic eradication of the dread disease in a village severely visited by this scourge, and at the same time is to serve as an example for other similarly affected parishes.

*Heubach: Vital Statistics and Housing Conditions.*

Heubach, the village selected for this practical experiment in modern prophylaxis, is situated at an altitude of 670 feet, in a small side valley in the Odenwald, half an hour from the railway line which intersects the forest from Hanau to Eberbach. It has a population of 1072 souls, which has steadily decreased since 1895, owing to the fact that the quarries in the neighbourhood are no longer worked to the same extent as was formerly the case. According to the occupation Census of 1907, 740 of the inhabitants were engaged in the following occupations:—

| | | |
|---|---|---|
| Agriculture ... ... ... ... ... ... | 401 | persons. |
| Quarrymen ... ... ... ... ... ... | 240 | ,, |
| Dressmaking and millinery ... ... | 48 | ,, |
| Building trade ... ... ... ... ... | 25 | ,, |
| Railway employees ... ... ... ... | 26 | ,, |

The number of births has declined from 53, in 1903 to 25 in 1912; the number of deaths during the same period has fallen from 30 to 14. In 1903 pulmonary tuberculosis was the direct cause of death in 11 cases, giving the enormous ratio of 88·4 per 10,000; and in 1912, of the 14 deaths 2 were attributable to this affection, or a ratio of 17·6 per 10,000, as compared with the average mortality from this cause of 12·9 per 10,000 inhabitants in the Grand Duchy. In the years between 1903 and 1912 the mortality from tuberculosis showed great variations, going as high as 57·5 per 10,000 in 1909, and sinking to 24·6 per 10,000 in 1906.

The village consists of 191 dwelling-houses, inhabited by 247 separate families; the houses are provided with a supply of drinking-water. The living conditions are the worst possible; the houses are damp, in large part owing to being built on a foundation of variegated sandstone, and the space is so restricted that in numerous instances no room is available to place another bed. As regards the available living space it was found that—

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | room | was | occupied | by | 1 | person | in | 290 | cases. |
| 1 | ,, | ,, | ,, | ,, | 2 | persons | ,, | 150 | ,, |
| 1 | ,, | ,, | ,, | ,, | 3 | ,, | ,, | 71 | ,, |
| 1 | ,, | ,, | ,, | ,, | 4 | ,, | ,, | 25 | ,, |
| 1 | ,, | ,, | ,, | ,, | 5 | ,, | ,, | 7 | ,, |
| 1 | ,, | ,, | ,, | ,, | 6 | ,, | ,, | 11 | ,, |

and in one case 1 room was shared by no less than 11 persons. Of even more interest are the data collected regarding the distribution of sleeping accommodation, which was found to be as follows:—

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | bed | was | used | by | 1 | person | in | 437 | cases. |
| 1 | ,, | ,, | ,, | ,, | 2 | persons | ,, | 210 | ,, |
| 1 | ,, | ,, | ,, | ,, | 3 | ,, | ,, | 55 | ,, |
| 1 | ,, | ,, | ,, | ,, | 4 | ,, | ,, | 10 | ,, |
| 1 | ,, | ,, | ,, | ,, | 5 | ,, | ,, | 2 | ,, |

*Financial Questions.*

The total expenditure of the local sick club amounted in 1912 to £159, of which £31 10*s.* were for medical attendance; the claims made upon the club have been so great that it was found necessary to raise the rate of contribntions. In addition, no less than 122 persons are in receipt of disablement benefit, totalling £950 annually. On the other hand, the financial situation of the village is excellent; it possesses forest property bringing in about £1500 yearly. It is also interesting to note that the consumption of beer has steadily decreased of recent years; in 1906 the amount drunk reached to 28,820 gallons, against 18,920 gallons consumed in 1912.

*The Inauguration of the Campaign.*

The prevailing unhygienic conditions in this village induced Privy Councillor Dr. Dietz to select it for an object lesson in practical sanitation. A conference was attended by the district medical officer of health, the medical adviser to the insurance bureau, the three medical practitioners residing in the neighbourhood of the village and practising there, the director of the tuberculosis sanatorium, the mayor of the village, the local clergy, and the village nurse. A plan of campaign was then decided upon, including improvement of the housing conditions, to fight against the abuse of alcohol, provision of baths and milk for the school children, care of the teeth of the children, disinfection, and special care of the curable as well as incurable cases of tuberculosis. The inhabitants showed a distrust of the steps to be taken, but no resistance was offered. A second nurse was engaged to deal solely with the tuberculosis problem. The district medical officer of health held two lectures on "tuberculosis in general" and on "proper feeding." Placards dealing with tuberculosis were affixed to suitable places in the village and leaflets were widely distributed. All the adult inhabitants underwent medical examination by the doctor of their choice, with radiographic and bacteriological observations where necessary. Among the adult population 159 cases of inactive and 190 cases of active tuberculosis were demonstrated; bacilli were found in 13 instances. The von Pirquet test was applied to 400 children, and of these 141 showed a positive reaction, or 44·2 per cent.; the greatest percentage was found during the ages of 14 to 16 years, which yielded 75 per cent. of positive cases among the total

*The Measures in Regard to the Children.*

It was decided to begin active measures with the children. A milk kitchen was installed in the school house, and a room set apart for the children in which to drink the milk, curiously enough an unknown drink to them. At present 150 children are given in the morning a cup of milk and

a piece of black bread covered with plant butter, and another cup of milk in the afternoon. This has had quite a good effect by causing the use of black bread and plant butter to be adopted by the inhabitants, to whom both articles were hitherto practically unknown as articles of food. In a few weakly children a nutrient preparation was added to the milk. It was found that the greatest gain in weight took place during the first period, and with one single exception every child increased on an average by 2·75 kilogrammes in 8½ weeks with milk alone, while those who received a nutrient preparation as well exhibited an average gain in weight of 3·15 kilogrammes.

In the morning and afternoon the school children are made to go through a course of breathing exercises under the supervision of the teacher, who was specially instructed for this purpose by the medical director of the tuberculosis sanatorium. Two large baths with douches have been installed in the school house, and all the children who showed a positive von Pirquet reaction are given weekly three saline baths. On two days of the week the baths are at the disposal of the remainder of the inhabitants. In some cases of suspected infection among the children inunctions of tuberculin were performed, and the observations made point to the utility of this procedure.

*Other Measures: the Cost of the Scheme.*

Great difficulties were encountered in urging upon the inhabitants the necessity of observing strict cleanliness in their dwellings. Special attention was paid to the laundry question. It was decided that white articles should be boiled in a steamer, but woollen and coloured goods, which do not stand boiling, should be soaked in crude lysoform and then washed with water. As the inhabitants objected to send their soiled linen, &c., to be washed in the installation provided, since they did not wish to make it known in whose houses tuberculosis was present, it was decided to provide the necessary steamers, portable washing-machines, &c., and lend them to the inhabitants to do their own washing. In the beginning the washing-machine was fetched by the inhabitants at night time only, but it is hoped that in time they will come to appreciate the value of this treatment of the soiled linen.

A regular disinfection of the dwellings takes place in the event of a death and at removals, and is supervised by the nurses. Spittoons and pocket-spittoons, 100 of each, have been distributed to the villagers, as well as clinical thermometers. In addition 21 beds and 6 invalid lounge-chairs have been provided.

As a further result of the systematic examination of the whole of the inhabitants during the first eight months that the scheme has been in operation, 15 persons were admitted to tuberculosis sanatoriums and 3 placed in homes for invalids; 9 children were sent to children's homes, 4 to saline baths; furthermore, already 11 persons have been granted disablement benefit. Steps are being taken to provide some suitable occupation for those in receipt of disablement benefit, such as the growing of fruit or vegetables.

The total expenditure so far entailed by this scheme amounts to £1013 10*s.* for the first year, £293 10*s.* being initial expenditure, £445 cost of treatment, and £275 cost of food and salaries.

It is as yet too early to draw a definite conclusion as to the value of the above-mentioned measures, but after the short time of only eight months a gratifying effect is already apparent. In the first place, the general health and intelligence of the school children show a considerable improvement, and the inhabitants themselves are beginning to take an interest in the measures introduced for their benefit; they no longer accept their unhappy lot with resignation, but are beginning to appreciate the aim and the value of the steps undertaken to improve their health, and thereby their condition. The further results of this practical experiment will be awaited with interest.

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UNIVERSITY OF SHEFFIELD.—Mr. J. H. Dible, M.B., Ch.B. Glasg., has been appointed to the post of junior demonstrator in pathology, vice Dr. M. Douglas, resigned.—The John Hall Gold Medal in Pathology has been awarded to William Barnsley Allen and Gordon Fowler Stones, bracketed equal.

# Home and Foreign Notes.

(FROM OUR OWN CORRESPONDENTS.)

## NEWCASTLE-ON-TYNE.

*The Clinical Society, Newcastle-on-Tyne.*

THE annual address of this society was delivered by Professor G. R. Murray, of Manchester, on Nov. 21st, in the College of Medicine. The title of the address was "The Clinical Significance of Spontaneous Hæmorrhage." Professor Murray, after referring to the pleasure it gave him to revisit Newcastle and deliver the address of the society, of which he was an honorary member, proceeded to discuss in detail the importance of arriving at a diagnosis in cases of spontaneous, and it might be slight, hæmorrhage. He reminded his audience that slight bleeding might be of more serious import than severe, and that in the former case investigation and treatment were often delayed with disastrous results. He discussed in some detail the causes of hæmorrhage from the various organs and mucous surfaces, the whole lecture proving both interesting and instructive. In the evening the annual dinner of the society was held in the Central Station Hotel, when Professor Murray was the guest of the evening. The President of the society, Dr. D. Wells Patterson, was in the chair, and presided over a large gathering, among whom were the Lord Mayor of Newcastle (Councillor Johnstone Wallace), the Sheriff (Councillor Herbert Shaw), Professor Sir George Hare Philipson, Professor Sir Thomas Oliver, Professor R. A. Bolam, Professor R. P. R. Lyle, Professor S. McDonald, Professor J. Wight Duff, Professor T. Beattie, Professor W. E. Hume, and Dr. N. Maclay and Dr. H. J. Slade (the honorary secretaries of the society). The toast of the evening was proposed by the President, who in the course of his remarks reminded the audience of the association of their guest with Newcastle-on-Tyne, where Professor Murray had laid the foundation of his splendid work in regard to disease of the thyroid. In his reply Professor Murray urged that all young practitioners should do some work during "the golden period of life"—from twenty-five to thirty-five was the best time to lay the foundations of a reputation. After these years it was increasingly difficult to start on any new enterprise in the department of medicine.

*University of Durham College of Medicine.*

At a meeting of the council of the College of Medicine held on Nov. 12th, under the presidency of Sir G. H. Philipson, the following appointments were made:—Lectureship on diseases of throat, nose, and ear: Dr. S. S. Whillis. Lectureship on diseases of the skin: Professor R. A. Bolam. Lectureship on diseases of children: Dr. O. W. Ogden. Lectureship on surgery: Mr. G. G. Turner. At the meeting it was reported that Dr. T. Outterson Wood, a graduate of the University, had forwarded a cheque for £250 to found a prize in the college to be named the Outterson Wood prize in Psychological Medicine.

*Mr. F. H. Booth, M.P., on the Panel Doctors.*

Mr. F. H. Booth, M.P., has visited Newcastle with the object of inaugurating a local branch of the "Faculty of Insurance," the object of its existence being to help in training and making efficient the officers of Friendly Societies and Trade Societies

and other persons concerned in the administration of the Act. He criticised the medical profession, which he found overpaid. Doctors all over the country, he said, had admitted to him that the actual remuneration they were getting was considerably more than they anticipated. He knew of instances also where doctors invariably sent in a private bill to panel patients and recovered money if they could. Considering the way in which the State had treated the medical profession he thought they had a right to expect a little more loyal service and more consideration to the hardworked members of the Friendly Societies than they were receiving. He admitted that the great majority of doctors were now trying to do their best under the Act, but in some districts, unless they were more considerate, there would be a repetition of the terrible lesson they received at Wisbech. It is interesting to note that a few days later the Grand Master of the Manchester Unity of Oddfellows, Bro. Walter Wright, of Reading, at a dinner of the Seaham District of the Order, said:—

> The enormous amount of consideration which doctors were now showing their patients was becoming a serious menace. The Oddfellows were unwarrantably and treacherously deprived of administration of medical benefit, and the result was that a doctor had to keep himself popular with his patients if he wanted to make a decent living.
>
> The doctor's business had been put practically on a basis of pure commercialism, and he had to be careful not to upset his insured patients, because if a man went to the doctor and said he wanted a rest, and the doctor said there was nothing wrong with him and he had to go back to work, the patient made up his mind to change his doctor and get one a little more sympathetic. The result was that the funds were being seriously depleted.

These two quotations serve to illustrate the reasoning with which it is hoped to mould public opinion on these matters. Both critics agree in complaining of the doctors, one finding the amount of consideration shown by them to be too great, and the other finding it deficient. Mr. Booth is a politician and appears to know nothing about the Wisbech tragedy.

Nov. 25th.

## MANCHESTER.

*University Court and Progress of the University.*

A MEETING of the court of governors of the University was held on Nov. 19th. It appears that the number of students is nearly the same as in the previous year, 1663. The total receipts for the year amounted to £81,865 and the total expenditure £81,716, while the whole assets in the balance-sheet stood at £1,390,921, and the total value of the University site, buildings, and fittings is put down as £593,235. The number of students in the Faculty of Medicine is 334. In the Faculty of Medicine there were 138 pursuing Manchester University degree courses and 242 passing other courses.

*Appeal for Funds for Central Branch of the Royal Infirmary.*

The new central branch of the Manchester Royal Infirmary is expected to be ready for opening next February. The total cost of the building is £25,000, and the sums received or promised amount to £14,500, so that £11,000 are still required if the branch is to be opened free from debt. The chairman of the board of management has issued an appeal for funds.

*The Children and Drink Bill of Salford.*

At the annual meeting of the Civic League of Health for organising personal service among the poor of Salford, which was held on Nov. 20th, Mr. F. J. Marquis, warden of the Liverpool University Settlement, after referring to the infant mortality of Salford, pointed out that at 5 years of age 4 per cent. of the children of the borough were suffering from tuberculosis, while 4 per cent. of the children of 12 years were undersized, and 8 per cent. undernourished. Mr. Marquis calculated that 25,000 in a population of rather less than 250,000 were on the verge of destitution. Mr. G. H. Butterly, of the Band of Hope Union, said that Salford's drink bill last year amounted to £819,430. There are 47,937 inhabited houses in Salford. By taking an average of 4·83 persons per house, the average amount per head spent on liquor worked out at £3 10*s.* 9*d.*, or £17 1*s.* 9*d.* per house. During the year 980 children died under the age of one year, a rate of 154 per 1000 births. About 6000 visits had been paid by health visitors to the homes of newly-born children, and yet notwithstanding the better conditions and trained help, little progress seemed to be made.

*Manchester Ear Hospital: Annual Meeting.*

At the annual meeting, which was held on Nov. 19th, it was stated that the debt amounted to £1699. The chairman appealed for an increase of £300 or £400 for annual upkeep. During the past year 885 operations were performed under general anæsthesia in addition to a very large number of minor operations. Patients are sent from many outlying districts. The Education Committee also send children, and it was stated that the hospital ought to benefit in some way from the Education Committee funds, but so far it had received nothing.

Nov. 25th.

## SCOTLAND.

*The Dundee Chair in Chemistry.*

AT a meeting of St. Andrews University Court, held on Nov. 15th inst., Mr. Alexander Mackenzie, M.A., B.Sc., Ph.D., head of the chemistry department of the Birkbeck College, London, was appointed professor of chemistry in the University College, Dundee, in succession to the late Professor Hugh Marshall. There were 15 candidates for the chair.

*Treatment of Tuberculous Cases in Aberdeenshire.*

At a meeting of the Aberdeen district committee, held in Aberdeen on Nov. 17th, it was decided that a ward for the treatment of persons suffering from tuberculosis should be erected in the vacant ground at Summerfield Hospital, and that the conditions imposed on the acceptance of the scheme by the Local Government Board should be accepted. These conditions are that within a period of two years from completion of building accommodation would be provided for the nurses by an extension of the present administration block, or otherwise than within the ward.

*A Glasgow Physician's Bequest.*

The entire estate of the late Dr. Gavin Paterson Tennent, of Glasgow, consulting physician to the Western Infirmary, Glasgow, has been left for philanthropic purposes. The principal bequest is £25,000 to the University of Glasgow for the Faculty of Medicine. The residue of his property he left for distribution between the Royal Infirmary, Glasgow, the Western Infirmary, Glasgow, the Victoria Infirmary, Glasgow, and the Royal Hospital for Sick Children, Glasgow.

Nov. 25th.

## IRELAND.

*Outbreak of Enteric Fever in a Dublin Suburb.*

A SERIOUS outbreak of typhoid fever has occurred in the Pembroke township, which is practically the best residential district of Dublin, being separated from the city merely by the Grand Canal. During the week beginning Nov. 14th some 22 cases were notified to the health authorities. Inquiry disclosed the fact that the families in which the cases occurred had a common milk-supply. The daughter of the dairyman who sent the milk was found to be ill with typhoid fever. The Local Government Board ordered the dairy to be closed, and it is hoped that no further cases may occur. It appears that in all some 60 families were in receipt of milk from the infected dairy.

*The National Insurance Act.*

Some of the Irish Insurance Commissioners have been visiting different parts of the country collecting evidence in reference to "excessive sickness." They have examined the secretaries of various Approved Societies and their own medical advisers, but in no place have any members of the Local Medical Committees given evidence, as, in accordance with the request of the Irish Medical Committee, they have left that body to deal directly with the Commissioners. The following figures in reference to the insured are interesting. In the whole of Ireland there are roughly 700,000 insured persons under the Act, and of this number 300,000 live in Ulster; and taking the two largest cities there are only 91,000 insured people in Dublin, while in Belfast there are 150,000—exactly one half of all those insured in the province of Ulster. A very remarkable feature of the Belfast figures is that of the 150,000 insured in that city 80,000 are females, which is a proportion of women to men larger than what exists in any other city, not excepting the large industrial centres of Lancashire and Yorkshire; and this fact, taken in connexion with what is generally agreed was a very doubtful actuarial estimate as to the amount of sickness among insured women, is most noteworthy. In reference to the sanatorium benefit the Local Government Board has in several cases refused to sanction the appointment of tuberculosis medical officers until those selected will take further periods of study in order to make themselves conversant with the modern methods of dealing with tuberculosis.

*Epidemic of Poliomyelitis.*

At Cookstown rural council, on Nov. 22nd, Mr. R. Burgess, medical officer of Coagh Dispensary, co. Tyrone, reported that eight deaths of children had taken place in his district from poliomyelitis, and that several cases were under his care in co. Derry, bordering on co. Tyrone. Mr. H. Harris, medical officer of Stewartstown, co. Tyrone, has also reported a case. No second case has occurred in any one house. Nothing is known as to how this virulent epidemic in a very isolated part of the country has arisen. The schools in the area have been closed, and disinfection and lime-washing of the houses have been employed.

*Epidemic Disease in Belfast.*

Never in the experience of the present members of the profession in Belfast has there been so much epidemic disease. Dr. A. G. Robb, in his report to the guardians for the week ended Nov. 15th, said that, owing to the large number of scarlet fever cases admitted into the union fever hospital, it had been necessary to provide additional wards, which was done by taking over the recently erected buildings close to the hospital, where accommodation for 75 cases was provided. At a meeting of the board of guardians, held on Nov. 18th, the chairman said they had over 200 cases of scarlet fever in the hospital, and it was decided to appoint for a time an additional resident medical officer. At the meeting of the public health committee, held on Nov. 20th, it was reported that 88 new cases had been notified, and now at the beginning of this week the wards at Purdysburn Hospital are full. Also there is an outbreak of typhoid fever, and 50 cases are in the municipal fever hospital. There is also a number of cases of diphtheria. In the city there is also an epidemic of rötheln, not, fortunately, of a bad type, but the epidemics of scarlet fever, typhoid fever, and diphtheria promise to be severe. Further, cases of ordinary illness are said to be showing anything but good recuperative power, due perhaps to what the older type of practitioner would designate as "the epidemic type of the season." Under the Tuberculosis Act, 1908, a committee of management has been appointed by the city corporation, consisting mainly of members of the public health committee.

Nov. 25th.

## PARIS.

*The Twenty-fifth Anniversary of the Founding of the Institut Pasteur.*

ON Nov. 15th the President of the Republic, with the Presidents of the two Chambers, of the Council of Ministers, many Ministers, and all the directors of the services of hygiene and medicine, visited the Institut Pasteur, where he was received by the director, Dr. Roux, and all the *chefs de service*, Professor Metchnikoff, M. Borrel, M. Laveran, M. Yersin, Dr. Calmette, Dr. Levaditi, Dr. Dujardin-Beaumetz, and others. The President visited the crypt and laid a palm on the tomb of Pasteur and his wife, which was already covered with flowers. After a tour of the institution the company repaired to the great amphitheatre where M. Darboux, a former *doyen* of the Faculty of Sciences and President of the Council of the Institut, delivered an interesting address, in which he traced the history of the institute from its inception as the result of the discovery of antirabic vaccination in 1888. To-day, beside the research laboratories, which are very numerous, and the services for teaching, there are special services for the preparation of serums (to which are attached the stables of Villeneuve l'Etang and of Garches), particularly of hydrophobia, diphtheria, plague, and antivenomous serum, services for epizootics for industrial yeast, with a large bacteriological laboratory, special sections for the study of tropical diseases and of syphilis, with a large monkey house, and, finally, a hospital constructed in accordance with the most modern data of science, which has served since as a model for most of the hospitals for infectious diseases in Europe. Each isolation room is practically a glass cage, entrance to which is gained only from a corridor open to the outer air. In these the gravest cases of the most contagious diseases are treated without a single instance of the transmission of any disease since the foundation of the institution. Dr. Roux traced the work of the school and its pupils, recalling one by one all the discoveries made, calling forth great applause as each name was mentioned. His

own connexion with diphtheria antitoxin, however, he modestly disguised under the indefinite pronoun "*on*" Later, in his own laboratory and in working attire, he received a medal struck in his honour at the instance of his collaborators and pupils, but he would not consent to its presentation in the presence of the President of the Republic, as he had refused to sit to the artist for the portrait.

*Proposed New Pharmacy Law.*

The Académie de Médecine has been called on for an opinion by the Goverment for advice in the question of regulating the sale of dangerous poisons, as legislation has become requisite in consequence of the spread of morphinomania and cocainomania, and also in regard to the commercial use of poisonous substances such as lead arsenate, which are largely used in viticulture to save the vineyards. The poison becomes mixed with dust and, blown about by the wind, is deposited on water, milk, fruits, and vegetables. Another point concerns the right of the chemist to dispense afresh an old prescription. The syndicate of medical men and that of pharmacists are at issue on this point, the former referring to the danger of the injudicious continuance of the use of a prescription that was directed to a particular stage, and perhaps for a totally different illness, and also to the using of prescriptions by persons for whom they were not written, and for whom they may be injurious—dangers especially to be dreaded with habit-forming drugs, and the latter replying that to interfere with their right to renew a prescription will only drive the patients to less scrupulous chemists. This purely commercial argument the medical profession thinks cannot be considered against the danger entailed to the public health.

*The Packing of Tea in Lead Foil.*

In consequence of an opinion by the Conseil d'Hygiène a circular which, under the authority of Article 3 of the decree of June 12th, 1912, forbade the introduction into France of tea packed directly in contact with lead foil has been suppressed by the Minister of Agriculture. Owing to the protests of merchants that the interposition of paper or tin was hygienically useless, and the regulation tended to paralyse the importation of tea into France, an investigation was ordered, which revealed the fact that for very many years back no case of lead poisoning attributable to the use of tea had been recorded, and that the conditions of its preservation and use did not allow of the possibility of lead poisoning. The prohibiting article, therefore, is not to be applied henceforth to packages of tea and will be modified accordingly.

*Memorial to Professor Dieulafoy.*

On Sunday morning last a monument raised by subscription to Professor Dieulafoy at the Hôtel Dieu was unveiled. It consists of a marble statue placed on the wall of the corridor of the first storey looking on the courtyard. It is situated beside the entrance of the Trousseau amphitheatre, where for 15 years Professor Dieulafoy delivered every Saturday the lectures the reputation of which attracted a large concourse of French and foreign medical men. Dieulafoy is represented in his professor's robes, Professor Fernand Widal, who delivered the inaugural address, well said that while this celebrated physician was the inventor of the aspirator bearing his name and author of classic works on hypertoxic appendicitis, on the minor symptoms of Bright's disease, and on subphrenic abscess, he was pre-eminently a gifted orator, a man of precise ideas and keen observation, possessed of a sonorous voice and remarkable articulation and of elegant and expressive gesture. Professor Landouzy drew a living picture of Dieulafoy in private life as a methodical and scrupulous man, interesting himself in the arts and in history.

Nov. 24th.

## CANADA.

*Canadian Medical Schools.*

ALL the medical schools of Canada have again opened for the season 1913–14. In the Halifax Medical College Dr. John Stewart, lately honoured by his *alma mater*, Edinburgh University, with the degree of LL.D., has been appointed professor of surgery, Dr. N. E. Mackay having resigned. A new building has just been erected for the department of pathology by the provincial government. Another new building is now in course of erection to accommodate the departments of chemistry and physics of Dalhousie University. Twenty-four new students were enrolled at the opening of the session. In the Western University at London the medical school is now a department of the Western University, with Dr. H. A. McCallum as dean and Dr. W. E. Waugh as registrar. Dr. Paul S. McKibbin, of the department of anatomy in the University of Chicago, has been appointed chief of the anatomical department. The five years' course has been adopted. Queen's Medical College, Kingston, Ontario, has, too, recently become a department in Queen's University. It has a registration list in the first year of 73. In the opening of the medical department of the University of Toronto Dr. B. P. Watson, late of Edinburgh, and now professor of gynæcology and obstetrics, delivered the opening lecture. The registration of students here is as follows: first year, 136; second year, 101; third year, 118; fourth year, 111; fifth year, 89. Fifty-one of these are taking the combined seven years' course. At McGill University Dr. A. C. Geddes has been appointed professor of anatomy in succession to Dr. F. J. Shepherd, who retains the position of Dean.

*Amendment to Alberta Medical Act.*

The Alberta Legislature now in session is discussing an amendment to the Medical Act, which is designed to induce medical men to settle in the more thinly peopled parts of that province. By it any medical man entering the province, whose diploma gives him the right to apply for examination under the provincial Medical Act, may be granted an interim licence providing he will practise 20 miles away from the nearest practitioner.

*The Municipality and Medical Affairs at Winnipeg.*

On Sept. 18th at a meeting of the Trades and Labour Council of Winnipeg a resolution was passed calling for a municipal hospital. It was also suggested that the offer of the General Hospital to place the management of the hospital in the hands of the municipal authorities be accepted. Winnipeg recently voted on a by-law to provide the General Hospital with $275,000. Less than 3000 ratepayers voted out of a possible number of 18,000, showing an indifferent public opinion. It has been decided to submit the by-law a second time in December at the annual municipal elections. Dr. R. J. Blanchard and Dr. J. S. Gray, on retiring from the active staff of the General Hospital

after 25 years' service, were entertained at a complimentary dinner by their colleagues, when presentations were made. Dr. Blanchard was President of the Canadian Medical Association in 1909, and Dr. Gray is Registrar of the College of Physicians and Surgeons.

*The Visit of Sir Rickman Godlee.*

Sir Rickman Godlee, President of the Royal College of Surgeons of England, visited Toronto on Nov. 4th to 6th as a guest of the Academy of Medicine. On the evening of the 4th he gave an address to the members of the Academy on foreign bodies in the air passages. In the afternoon of the 5th a special convocation was held by the University of Toronto, when Professor Irving H. Cameron presented the distinguished guest for the degree of Doctor of Laws. In the evening Sir Rickman Godlee was entertained at the Æsculapian Club.

*Dr. Grenfell.*

Dr. Grenfell, the well-known medical missionary, returned to St. John's, Newfoundland, early in October, after spending the summer in the northernmost parts of the districts which he has made his own.

Nov. 12th.

## SOUTH AFRICA.

*Medical Inspection of School Children.*

LITTLE work has been done in South Africa in this direction, but even that little affords proof of the urgent need for systematic medical inspection in all State-aided schools. A debate on the subject, initiated by Dr. D. M. Tomory, medical officer of health of Bloemfontein, in a paper read before the recent South African Congress, has revealed some diversity of opinions as to whether the work should be carried out by whole-time medical inspectors or by employing district surgeons and private medical practitioners. The Congress recommended the adoption of compulsory systematic inspection of school children, and a copy of the recommendation has been forwarded to the education departments of the various provinces and to the South African Teachers' Association and action has already followed. The size of the subcontinent precludes, one would think, reliance upon whole-time inspectors.

*Shortage of Junior Practitioners.*

Apparently owing to the operation of the National Insurance Act in Great Britain, for some time past but few practitioners have registered within the Union, and there has been great difficulty in obtaining locum-tenents and in filling junior professional posts in the different institutions in South Africa. As a result of this difficulty many practitioners who have proceeded to Europe this year have had to leave their practice in the hands of local colleagues, sometimes under circumstances which have thrown an extremely heavy burden of work on the men thus acting. Apart, moreover, from the operation of the Insurance Act there is the known fact that a medical newcomer in South Africa has not much prospect, for unless he be an Afrikander the probabilities of obtaining public appointments under present conditions are extremely doubtful.

*Friction between the Government and Natal Medical Council.*

As a result of differences between the Government and the Natal Medical Council the latter body has declined to proceed with any business save registration.

*The Railway Sick Fund Dispute in Natal.*

The local medical profession has been unable to obtain the capitation rate demanded, viz., 12*s*., expenses in South Africa being at least 60 per cent. higher than in Great Britain. Already the Natal Sick Fund Board has had to more than double its original offer by coming up to the Transvaal scale of 7*s*., and there is now little doubt that in the Cape action will have to be taken to raise the remuneration there to an equality with that in force in other provinces. Moreover, if the Natal Board can be made to give 12*s*. the other boards can also doubtless be made to do the like. It is understood that the South African Committee have the whole matter under consideration with a view of seeing how the Natal branch can be assisted in its dispute, and whether the time has not arrived when the questions at issue should not be brought to a head also in the other provinces of the Union.

*The Milk-supply of Johannesburg.*

An excellent report is published by the medical officer of health of Johannesburg covering one prepared by Dr. J. Pratt Johnson, his acting assistant medical officer of health. The total daily supply of the town is 8200 gallons, of which only 2220 come in from outside the municipality. The report reveals some most disgusting conditions in certain dairies. We read, for instance, that a large number of dairies are crowded on single stands 50 feet square, the cowsheds and appurtenances sharing this small area with a dwelling-house and its outbuildings. Of the dairies within the municipal area, 24·8 per cent. are classed as "bad,' and 7 per cent. as "very bad." As regards the outside sources of supply we find 31·8 regarded as "very bad." The report makes a number of recommendations for the betterment of existing conditions which will be endorsed by all, but suggests that discretion should lie with municipalities to consider "personality" in granting licences to dairymen. This would be an utter impossibility in South Africa, for it would develop in most municipalities into the rejection of every applicant other than Europeans.

*Health of Beira.*

A great deal of indignation is being expressed at Beira at the cavalier manner in which the directors of the Mozambique Company treat questions vital to the health of the territory they administer, particularly at Beira. For years, in spite of many promises, nothing has been done, and recently the community has been informed that the company is not prepared to take action in the direction promised. The most pressing of these questions at Beira are perhaps those relating to the water-supply and to hospital accommodation. Recently the Chamber of Commerce Board decided to start a fund immediately for the purpose of sending a deputation to Lisbon to demand that immediate steps be taken to provide a proper water-supply for the town and hospital accommodation for the territory generally. In the event of the deputation failing to get satisfaction from the directors of the company the matter is to be referred to the Government of the Republic for redress, and every effort will be made to force the Government to take it up.

Nov. 7th.

THE Academy of Sciences of Munich has elected Dr. J. N. Langley, professor of physiology in the University of Cambridge, a corresponding member.

# Obituary.

## RICHARD DEANE SWEETING, M.A. OXON., M.D. DUB., M.R.C.S. ENG., D.P.H. CAMB.,

SENIOR MEDICAL INSPECTOR TO THE LOCAL GOVERNMENT BOARD.

WE regret to record the death of Dr. Richard Deane Sweeting, which took place in London on Nov. 10th.

Dr. Sweeting, who was the eldest son of Dr. Richard Sweeting, a medical man practising at Clapham, was born in 1856 in the Bahamas, and received his early education at Malvern and Oriel College, Oxford. Later he pursued his medical studies at the London Hospital, where he was house physician and where he gained the Buxton scholarship in 1874. He qualified by becoming a Member of the Royal College of Surgeons of England and a Licentiate of the Society of Apothecaries in 1879. In 1883 he obtained the Howard medal and prize of the Statistical Society for an essay on the Sanitation of Public Institutions.

His early experiences both in medicine and the law—he was called to the Bar by Gray's Inn, of which society he was Holt Scholar in Constitutional Law in 1895—admirably qualified him for the position which he subsequently occupied as senior medical inspector to the Local Government Board. For some ten years he was medical superintendent of the Western Fever Hospital under the Metropolitan Asylums Board, and was an examiner in public health and preventive medicine at the Universities of Oxford and Cambridge. Later he was appointed an examiner in public health to the English Royal Colleges of Surgeons and Physicians. For 20 years he was honorary treasurer of the Epidemiological Society of London, and he was a Fellow of the Royal Society of Medicine and a vice-president of the Epidemiological Section of that society. Having previously served as a temporary inspector during the cholera survey of 1885 and 1886, he joined the medical department of the Local Government Board in 1890, and from that time onward his work was wholly identified with the activities of that important Government department. Many of his valuable contributions to the study of public health are incorporated in the medical returns of the Western Fever Hospital, 1880–89, in Blue-books, 1882 and 1890, and in the minutes of the Metropolitan Asylums Board.

At the Local Government Board Dr. Sweeting was less conspicuously associated than some of his contemporaries with epidemiological investigations and inquiries into the causation of disease, but, on the other hand, full use was made of his extensive knowledge of public health work and administration, and many parts of England can date back the beginning of practical sanitary improvements, or the reform of their public health organisation, to Dr. Sweeting's inspections and reports. He undertook also many important public inquiries for his department, in the conduct of which his skill and legal knowledge were conspicuous. In work of this kind, where perhaps he was at his best, Dr. Sweeting was increasingly occupied until comparatively recently, when failing health compelled him to engage in less exacting duties.

Dr. Sweeting, who was a graduate in arts of the University of Oxford, took the D.P.H. of Cambridge in 1883 and the M.B. of Dublin in 1893, proceeding to the M.D. in 1904. He married in 1883 a daughter of the late Mr. William Rother, of Harrogate, by whom he had two daughters.

## GEORGE LEE WELLS, M.B., B.S. LOND., M.B., CH.B. LEEDS, F.R.C.S. ENG.

BY the death of Mr. George Lee Wells, which occurred on Nov. 14th, Leeds has lost a well-known and much respected practitioner. Born in 1856 he received his medical education at Yorkshire College and at St. Bartholomew's Hospital, London, where as house surgeon he obtained the Bentley Prize in 1886. At St. Bartholomew's he successively gained the first junior scholarship and the senior scholarship, while at Yorkshire College, of which he was an Associate, he won the Salt Scholarship. At this college he at one time held the senior demonstratorship of anatomy, and was clinical assistant at the Royal London Ophthalmic Hospital. In 1887 he graduated M.B., B.S. at the University of London, and in the following year became a Fellow of the Royal College of Surgeons of England, having previously in 1884 obtained the Membership of that corporation. For many years he was senior surgeon at the Leeds Public Dispensary, and had held the positions of surgeon to the Meanwood Convalescent Home for Children and surgeon for the National Society for the Prevention of Cruelty to Children. He from time to time contributed to the medical press, taking great interest in cancer research and diseases of the larynx.

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DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Richard H. Trautmann, of the Hamburg Hygiene Institute, whose papers on many bacteriological questions, milk sterilisation, and acute infectious diseases have caused his name to be well known. He was 38 years of age.—Dr. Ponfick, formerly professor of general pathology and pathological anatomy in the University of Breslau, and previously to his appointment to that chair professor in Rostock and Göttingen. He was a great traveller, having accompanied the Grand Duke Friedrich Franz III. of Mecklenburg-Schwerin to Egypt and Nubia, and he always took a great interest in colonial questions and was president of the Breslau branch of the German Colonial Society. His professional contributions to literature include an atlas of medical and surgical diagnosis, and papers on transfusion, myxœdema, and actinomycosis. His age was 69.—Dr. Grynfeltt, formerly professor of clinical medicine in the University of Montpellier.—Dr. G. Bouisson, formerly professor of natural history in the Marseilles Medical School.—Dr. Carl Curman, formerly lecturer on balneology and climatology in the Stockholm School of Medicine.—Dr. Feodor Schuchardt, professor of psychiatry in the University of Rostock, and formerly superintendent of the Sachsenberg Asylum, Mecklenburg, aged 65.—Dr. Pressel, of Zuffenhausen, Würtemberg, Sanitary Councillor.—Dr. H. Walther, of Ettenheim, Baden, Medical Councillor.

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PRESENTATION OF THE KINGSLEY MEDAL.—Mr. F. V. Theobald, M.A. Cantab., F.E.S., well known for his studies of mosquitoes, has been presented with the Mary Kingsley medal of the Liverpool School of Tropical Medicine. The presentation was made by Mr. F. C. Danson, the chairman of the school, on Nov. 14th, when he entertained a number of friends of the institution at luncheon at the Exchange Station Hotel, Liverpool, and read a letter from Sir Ronald Ross saying that few had played such a leading part as Mr. Theobald in the more modern developments of tropical medicine and sanitation. Dr. H. B. Fantham, lecturer on parasitology to the school, who recently undertook an expedition to Khartoum with the object of investigating some of the little-known diseases of the Soudan, was a guest on the occasion, and afterwards delivered an address on his researches.

# Correspondence.

"Audi alteram partem."

## THE GOVERNMENT OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

*To the Editor of* THE LANCET.

SIR,—I attended the annual meeting of the Fellows and Members yesterday, and I feel that the attitude adopted by some of those who spoke must do harm to the cause of the Members. I have been present at every annual meeting for the last 17 years, and at several of these meetings the tone adopted by those who spoke has been, to say the least of it, unwise; but I think that this meeting has surpassed those which have preceded it. The whole tone of many of the speakers was insulting to the Council, and I have reason to know that this attitude of some of the Members has estranged many Fellows who at one time were in favour of granting to the Members some share in the government of the College. I am a Fellow and I have always supported the claims of the Members, and I do so still in spite of the tone adopted at the annual meetings; but I have no difficulty in understanding that others who feel less keenly on the matter may be influenced by the action of some of the Members.

The criticism of the finances of the College was unintelligent; the speakers had apparently not troubled to make themselves acquainted with the information contained in the College Calendar. One speaker did not know what was the Committee of Management. The speaker who moved a resolution asking for a balance sheet did not make a single reference in his speech to a balance sheet, but dealt only with items of receipts and expenditure. There is nothing unreasonable in wanting to know how the funds of the College are spent, and I feel sure that all the information desired will willingly be given by the authorities; indeed, at the meeting itself the chairman answered all the questions put to him with an unfailing courtesy, although some of these questions were expressed in terms needlessly unpleasant.

I am sure that in time the Members will obtain some share in the election of the Council, but I am equally sure that the tactics adopted at the present time will postpone rather than hasten that day. I beseech all who have at heart the cause of the Members to do nothing which will estrange those Fellows who are in favour of the extension of the franchise.—I am, Sir, yours faithfully,

Harley-street, W., Nov. 21st, 1913. WILLMOTT EVANS.

*To the Editor of* THE LANCET.

SIR,—I venture to think that of the topics that are being discussed to-day there are few more important than the future of the Royal College of Surgeons of England.

When at an annual meeting of Fellows and Members, assembled with a knowledge that resolutions were going to be proposed which formed practically a vote of censure upon the administration of the College, we find that not a single Fellow or Member was present to support the Council, we have matter for profound cogitation. Whilst offering respectful homage to the members of the Council as surgeons of world-wide reputation, one cannot help feeling that they are out of place as administrators and legislators when they fail to recognise that they have wholly lost the support and sympathy of the members of the corporation which they rule.

Most Governments feel bound to resign when they earn a vote of censure or lose the confidence of the House; the Council of the Royal College of Surgeons of England, because they are not bound to resign and because their charter enables them to go on independently of the wishes of the Members expressed again and again, simply ignore the situation. This may be pathetic, but it is not sagacious.

In moving my resolution I ventured to suggest that the present charter gives the Council an opportunity of doing the right thing if only they were far-seeing enough, but if, on the other hand, the Council entrench themselves behind their charter and refuse to administer the corporation in accordance with the wishes of its Members, there will be no alternative but a unanimous demand to the Privy Council for an alteration of the charter. It is impossible that the matter should remain where it is. The unanimous meeting of Fellows and Members wholly antagonistic to the method of administration of the Council cannot be ignored.

I ventured to suggest two ways in which the Council under its present charter might go some way towards meeting the needs of the case.

1. It has the right to grant the F.R.C.S. to two Members annually without examination. If the Members selected a representative and the Council honoured their choice by granting the F.R.C.S. and a seat on the Council to this selected M.R.C.S., there would be some recognition that they understood the needs of the case.

The other suggestion is that under their present charter the Council could constitute quarterly meetings of Members for legislative and consultative purposes. Resolutions passed at such meetings would have no force until sanctioned by the Council, but at any rate they would keep the Council in touch with the pressing needs of the profession.

At the present time the Council in no way attempts to guide, counsel, or direct its Members in the times of stress through which they are now passing.—I am, Sir, yours faithfully,

JOSIAH OLDFIELD, D.C.L. Oxon.,
M.R.C.S. Eng.

Mitre Court Buildings, Temple, Nov. 21st, 1913.

*** Dr. Oldfield ventures to assume that he is speaking for 17,000 Members.—ED. L.

## URETERAL CALCULUS WITH PAIN GREATEST ON THE OPPOSITE SIDE.

*To the Editor of* THE LANCET.

SIR,—My attention has been directed to an annotation in THE LANCET of Nov. 22nd giving a description of a case of ureteral calculus with pain greatest on the opposite side, which was reported in the *Bristol Medico-Chirurgical Journal* for June last by Mr. C. A. Moore.

In both publications I am correctly quoted as disagreeing with the theory of Knowsley Thornton and Guyon that pain caused by renal calculus may be referred exclusively to the kidney of the opposite side—that, in other words, the *only* pain caused by a calculus on one side may be a reno-renal reflex pain felt in the region of the kidney of the other side.

In the second volume of my book, "Surgical Diseases of the Kidney and Ureter" (pp. 84–86 and 455), I have made it sufficiently clear that I recognise reno-renal reflex pain as well as a variety of other reflex pains, which I there describe, as due to renal and ureteral calculus. But my opinion to-day with regard to the occurrence of pain in a healthy kidney of one side, and nowhere else, as a result of the presence of a calculus in the kidney or ureter of the opposite side is the same as when I wrote in 1900. So far as my own experience and researches go, there is not a single case which affords satisfactory evidence of symptoms on one side only being caused by a stone in the kidney of the other side (p. 84, Vol. II., *op. cit.*).

I have recently had under observation a patient who, though free of pain on the left side but with three calculi in the left renal pelvis, had a sharp attack of pain in the region of the right kidney; this pain disappeared entirely after the discharge of a small concretion not larger than half a raisin-pip from the right organ. Had this minute calculus, too small to have given an appreciable shadow in a skiagram, not been detected in the urine, or had it not come away, but had continued to give rise to pain, the calculi which are still present in the left kidney might have been regarded as the sole cause of the right renal pain, and the case might have been described as a typical instance of the theory of reno-renal reflex.

Mr. Moore, with scientific candour, points out that the issue in his case was obscured, "as the pain might have been due to pyelitis produced by the colon bacillus." Still, the reno-renal reflex pain on the *right* side induced him to resort to the transperitoneal manipulation of both kidneys and ureters, notwithstanding the presence of "a markedly tender spot just internal to the *left* anterior superior iliac spine," to the detection by skiagrams of a small shadow in this situation, and to the fact that though pain was felt more in the right loin it occurred simultaneously in the left loin also.

This reno-renal reflex theory was used by Knowsley Thornton as an argument in favour of "abdomino-lumbar nephrolithotomy"—an operation whereby the peritoneal cavity is opened along the semilunar line and the calculus removed through a stab wound in the loin. The theory was urged by him as a reason for preferring that operation to lumbar retroperitoneal nephrolithotomy whereby the opposite kidney could not, of course, be examined.

I have pointed out in my book just referred to (Vol. II., pp. 196–8) the absence of confirmation of the theory itself and the fallacies to which its adoption in practice leads. There are many pathological states of the kidney and ureter, including renal calculus, which cannot possibly be detected by manipulating these organs *in situ*.

I have on several occasions been able to demonstrate to others that renal calculi weighing 30 or 40 grains or more, to say nothing of smaller concretions, escape every form of examination by digital compression until an incision has been made into the renal parenchyma. Thus the mere inspection and tactile examination of the kidney from within the abdomen do not afford a sufficient guarantee that the organ is normal within; nor is such an examination sufficient to justify the inference that a calculus quiescent as regards the ureter or kidney in which it is situated is the cause of pain in the kidney of the opposite side.

With reference to Mr. Moore's remarks on the rarity of recurrence of stone after a previous removal, I should like to add that if he will examine the cases tabulated in the first four tables appended to my Hunterian lectures (1898) he will find mention of several cases in which calculi were formed at intervals varying from some months to ten years after a previous operation on the involved kidney.

I am, Sir, yours faithfully,

Cavendish-square, W., Nov. 22nd, 1913. HENRY MORRIS.

## THE DIAGNOSIS OF SYPHILIS.

*To the Editor of* THE LANCET.

SIR,—The public health committee of the Chelsea borough council has made arrangements with the Lister Institute of Preventive Medicine for the carrying out of the Wassermann blood reaction free of charge for medical practitioners attending the poorer class of patients residing in Chelsea. Outfits can be obtained at the Lister Institute, and samples of blood may be sent either to establish a diagnosis in suspected cases or during the treatment of cases to ascertain the efficacy of treatment. The name and address of the person from whom the blood is taken must be included in the particulars required of the case, for the information of the medical officer of health as to the status of the patient and his being a resident in the borough. Such information will be treated in the strictest confidence, and no use whatever will be made of it to the detriment of the patient.

It does not seem feasible at the present time to arrange for the microscopical (dark ground illumination method) examination of discharge or material from chancrous sores, as it would seem desirable that such material should be taken direct from the patient by the expert who makes the microscopical examination, owing to possible errors in collecting material by less practised persons, and the effects of drying or other changes upon such material in transit to a laboratory for examination. Negative results in the determination of spirochætæ under such circumstances might give rise to unfortunate conclusions. No doubt this is a matter which will receive early consideration by the Royal Commission now sitting.—I am, Sir, yours faithfully,

LOUIS C. PARKES, M.D. Lond., D.P.H.,
Medical Officer of Health, Metropolitan Borough of Chelsea.

Nov. 22nd, 1913.

## RANGE OF FLIGHT OF MUSCA DOMESTICA.

*To the Editor of* THE LANCET.

SIR,—Recent elaborate experiments recorded in the reports on flies as carriers of infection issued by the Local Government Board fully bear out the natural observations I have made from time to time in field-work epidemiology as to the range of flight of Musca domestica being dependent upon the environment of the breeding-places.

In a special report upon epidemic diarrhœa in Southend in the year 1904 I introduced a "spot" map which showed that fatal cases of epidemic diarrhœa and excessive prevalence of flies occurred in houses grouped round a brickfield in which was an immense collection of house refuse (hundreds of tons), not only from the town, but from parts of London. In my annual report on the health of the

borough of Southend for the year 1906 I quote from a second special report published that year, that of some 70 deaths from epidemic diarrhœa that season in the whole borough 30 deaths were within a few hundred yards of the brickfields; 14 more were in a neighbourhood where a large number of stables, provision shops, and chicken-runs had recently come into existence, and flies were in superabundance in all the affected dwellings.

In the same special report I referred to a good-class house inhabited by decent people who kept servants, and which stood by itself some distance from other buildings. When I visited this house it proved to be the most fly-plagued house I ever was in—the ceilings and walls were simply black with flies, and no food could be prepared in the house without flies falling in; three flies were noticed in the baby's bottle. Two young children had suffered from epidemic diarrhœa (the baby died), and the family had fled the house. Less than a quarter of a mile away was a large collection (several tons) of house refuse, and the house was also midway between four farms—a most typical "place of arrestment" (as I termed it in my contribution on "House Flies as Carriers of Disease" in the *Journal of Hygiene*, 1909), because of its relative position to the breeding-place of the flies.

Again and again have I made the observation that flies escaping from a breeding-place are held up by the nearest occupied houses, and this almost irrespective of the direction from which the wind blows or the cleanliness of the house. Recently I was visiting a village in Norfolk where one of a terrace of houses in the main street was occupied by a rag and bone and skin dealer who also kept a horse, and incidentally a considerable collection of stable manure. On investigating the prevalence of flies in this street the difference between the numbers in the dwellings on one side of the street and the other as remarkable—the terrace of houses on the side of the street nearest the fly breeding-place having effected a considerable *arrestment* of flies, when compared with the opposite terrace.

The conclusion I have arrived at from natural field work observation is that flies do not readily leave a house in which they find protection, warmth, and abundance of food. Such houses near breeding-places suffer from a plague not realised by the occupants of houses even in the next street further away, and though fly-papers may show a daily suicide (unintentional) of several hundreds of flies, there are just as many more to be found 24 hours later if the windows are left open and the weather is warm. Of course, some flies in warm weather, if dry, pass from house to house in terraces and streets, and these may carry infection. Where houses are numerous, flies decrease in numbers in inverse proportion to the distance of the houses from the breeding-place. Inversely flies fly further when places of arrestment in the shape of houses are few or far off. Where houses are fairly numerous few flies will be found much beyond a quarter to half a mile radius from the breeding-place. Where houses are few flies will travel further afield, and many more will be found half a mile from the breeding-place than where houses are many. There is no reason why solitary flies should not in time cover a mile or more, especially in the open country. Environment is the chief determining factor in the range of flight of house flies.—I am, Sir, yours faithfully,

J. T. C. NASH, M.D. Edin.,
Chief Medical Officer for Norfolk.

The Shirehall, Norwich, Nov. 22nd, 1913.

## THE EFFECTS OF THE DUCTLESS GLANDS UPON DEVELOPMENT.

*To the Editor of* THE LANCET.

SIR,—There is in THE LANCET of Sept. 6th last a paper by Mr. Hastings Gilford with this title which I have read with much interest. I should like, Sir, to refer to the following passage in this paper (p. 719): "In a case of ateleiosis fully described by Arnold Paltauf there was a tumour of the pituitary body. On the other hand, in Schaaffhausen's case, in a skeleton in the Royal College of Surgeons of Edinburgh, and in a case upon which I myself made a post-mortem examination, there was no gross evidence of pituitary tumour or insufficiency."

I submit that the published accounts of these cases in the originals afford no indication whatever that the pituitary body was examined in any case; that the above is not a statement of facts, but a statement of inferences. In Paltauf's account of his case he states that the sella turcica was very large in all dimensions, not only as compared with that of a child of the same stature, but that the measurements were considerably greater than the average of those of several adults of normal growth. But he makes no mention of pituitary body at all in his account. It may be correct to infer that there was a tumour of the pituitary in this case, since the sella turcica was so much enlarged; but I submit that it is only an inference, not a fact; and Paltauf goes on to state that both the sphenoid and the basilar portion of the occipital bone showed measurements markedly smaller than those of a child of the same height, that the foramen magnum in its antero-posterior diameter was, on the contrary, very large. Is it justifiable to infer from this that structures passing through it were enlarged? Or is it a fact that they were so enlarged? Schaaffhausen makes no mention of the pituitary in his post-mortem account. And the account of the exhumed skeleton written about 14 years later teaches nothing about it. The same applies to the skeleton in the Royal College of Surgeons, Edinburgh, in spite of the additional facts (concerning the sella turcica) stated in Mr. Hastings Gilford's letter to THE LANCET of Sept. 13th. It is not necessary for cretinism that thyroid insufficiency be accompanied by a tumour; and one would ask why it should be in the case of pituitary insufficiency? There remains Mr. Hastings Gilford's post-mortem examination of his own case, and one cannot learn from the account of it that the pituitary was examined microscopically or even macroscopically. It seems probable that the pituitary gland was not in mind when these necropsies were made. Schaaffhausen's account was published in 1868, Paltauf's in 1891, and Mr. Hastings Gilford's in 1903, before the pituitary gland had attracted the amount of attention in relation to growth that it now receives. Paltauf, in his case, states that "the thyroid gland was small and pale red," and one might suspect that it was the thyroid that he looked upon with suspicion, not the pituitary. He did not know how to differentiate his case from cretinism (this is clear from the discussion of it), nor, apparently, did anyone else until Mr. Hastings Gilford took up the study of this condition.

I submit, Sir, that although it may seem probable that abnormality of the pituitary gland is the cause (either the sole cause or by association with other, possibly glandular, abnormality) of ateleiosis, yet there is no knowledge that the pituitary was

affected in any case described until now, except, if indeed it be a case of ateleiosis, in Rennie's case in Sydney, for the pituitary has not been examined in the other cases. And it is unscientific to mistake inferences for facts—this can, in fact, only cause subsequent difficulty in the investigation of this condition. I submit that adequate post-mortem examinations are required, and that there are a good many cases, well known, in which an opportunity of making them will be afforded (sooner or later) to enterprising readers of THE LANCET who are interested in this subject.

I am, Sir, yours faithfully,

Adelaide, South Australia, Oct. 14th, 1913. H. RISCHBIETH.

## TUBERCULIN TREATMENT.

*To the Editor of* THE LANCET.

SIR,—Considering the numerous and conflicting opinions as to the use of tuberculin, I think that the report of a year's work at the Islington Tuberculous Dispensary may prove of some interest.

During the year some 102 persons were under observation. Of these, (A) 11 were transferred to their own medical men for home treatment; (B) 9 were tested and found not to be tuberculous; (C) 14 were cured—all active disease arrested; (D) 21 were improved; (E) 31 ceased to attend; (F) 3 were sent away for operation, &c., to return later for treatment; (G) 7 were too early to report upon; (H) 5 were not yet sufficiently tested; and (I) 1 died. Of Class A, 2 are reported cured, 6 greatly improved, 2 improved, 1 no improvement. Of Class D, 11 are greatly improved, 10 are improving. Of Class E, it is to be regretted that the number is so large, but under the present circumstances we are not able to follow them up.

Although we have made no selection of cases, and have taken for treatment every one sent to us, no matter what his condition, we have had only one death, and that occurred before any treatment, or even a test dose, had been attempted. This is less than a 1 per cent. death-rate.

I am, Sir, yours faithfully,

A. H. SANDILAND,

Southgate-road, N., Nov. 19th, 1913. Registrar.

## BIG GAME AND SLEEPING SICKNESS VERSUS MAN AND HIS ANIMALS.

*To the Editor of* THE LANCET.

SIR,—Professor Todd has opened in your columns the question of big game and trypanosomiasis. Pending the report of the committee nominated by the Colonial Secretary to consider this very question, one is naturally not at liberty to say anything here of the subjects on which one gave evidence; but one remark I should like to make, and it is this. Your correspondent regards it as quite certain that the trypanosomes found in big game by Dr. Kinghorn and Dr. Yorke *are* pathogenic to man. I would like to submit that this cannot be considered settled until they have been proved to be so in fact. I quite admit the difficulty of obtaining such proof, but that there is need for it is suggested by the recent striking work of Dr. Taute. He found that the blood of animals infected experimentally from wild game with what appeared to be the human trypanosome *was not infective to himself by injection*, although the same blood was pathogenic to other animals.

I submit, then, that he has opened a new question. Does the sojourn in animals of trypanosomes pathogenic to man destroy that pathogenicity? If this is so, what need for destroying reservoirs of the *human* trypanosome? The question of game as a reservoir of trypanosomes pathogenic to domestic animals is, of course, not affected by this new work.

I am, Sir, yours faithfully,

GEOFFREY D. H. CARPENTER, M.D. Oxon.,
Member of Royal Society's Sleeping Sickness
Oxford, Nov. 22nd, 1913. Commission in Uganda.

## THE MEDICO-PSYCHOLOGICAL CLINIC.

*To the Editor of* THE LANCET.

SIR,—As my name has appeared as supporting a proposed psychotherapeutic clinic, I shall be obliged if you will allow me to say that I gave my support under a misapprehension of the aims and constitution of the institution. I have withdrawn from association with it, and I should only support a movement conducted on strictly professional lines.

I am, Sir, yours faithfully,

CHAS. LLOYD TUCKEY, M.D. Aberd.

London, W., Nov. 22nd, 1913.

*To the Editor of* THE LANCET.

SIR,—Our names having appeared as supporters in the circular convening the recent inaugural meeting of the Psychotherapeutic Clinic, may we be allowed to say that we can no longer support the scheme as it stands at present?

We are, Sir, yours faithfully,

HUGH WINGFIELD.

London, Nov. 20th, 1913. MAURICE B. WRIGHT.

## THE NATIONAL INSURANCE ACT.

### THE ATTITUDE OF FRIENDLY SOCIETIES TO THE MEDICAL MEN ON THE PANELS.

DELEGATES representing 62,000 members of the Bristol, West of England, and South Wales Operatives' Trade and Provident Society met recently at Cardiff to discuss various matters relating to the administration of the Insurance Acts and the financial situation created by it for their society. The medical profession, in particular, came in for denunciation in respect of the alleged loose signing of certificates, which was described as "a direct incentive to malingering and as largely responsible for the excessive sickness." With regard to this, however, officials of Friendly Societies must be reminded that two or three isolated examples of alleged laxity, however serious in character, are not sufficient to justify general charges and indiscriminate censure or to support a demand for fresh legislation, and that if there is general malingering it is exhibited by their members, who thus deceive their medical attendants. Consequently they are making general charges of dishonesty, of which there must be proof before they are considered to be established. The medical profession has never predicted that the financial provisions of the Act would prove satisfactory, and it has not failed to point out that the picked lives which constituted the voluntary membership of Friendly Societies should not be looked upon as furnishing any basis for estimating the demand for medical attendance likely to arise under compulsory and universal insurance. Medical men on the panel would be very glad to see the claims of the members of

Approved Societies for their services rendered less frequent and exacting, but it is the members in question who are exhibiting the desire for medical attendance complained of. There is no likeliness of a demand for the curtailment of sickness benefit coming from them, but there is every probability that after a year or two the temptation arising out of novelty will have been eliminated, when matters will settle down upon more normal lines. There will nevertheless always be a temptation to malinger as long as sickness benefits can be obtained equivalent, or nearly so, in value to the wages earned when in health. This is a condition for which the medical profession can certainly not be held responsible.

### UNDISTRIBUTED PATIENTS IN GLASGOW.

The Glasgow Burgh Insurance Committee at a recent meeting was informed that it had within its jurisdiction about 370,000 insured persons, of whom about 50,000 had not chosen their medical attendants and had not been allotted. It had 380 medical men on its panel with lists varying from no patients or a single one to 4365. The special subcommittee which had considered the matter recommended the distribution of the unallotted persons equally among practitioners having not more than 2000 on their lists, but so that no list should be raised to above that number. The medical benefit subcommittee adopted an amendment to this recommending that 1500 be substituted for 2000 as the maximum. The Insurance Committee remitted the minute back and consideration of the question is deferred.

### THE NATIONAL INSURANCE ACT AND THE FABIAN RESEARCH DEPARTMENT.

Mr. Sidney Webb, as chairman of the Committee of Inquiry into the working of the Insurance Act, instituted by the Fabian Research Department, writes to us saying that the committee has reason to believe that some insured persons are being refused the benefits to which the Act entitles them; and that many poor people feel unable to resist what seems to them oppression. He therefore invites all who know of any case of what seems to be wrongful refusal of benefits to write (in strict confidence) to him at 37, Norfolk-street, Strand, London, W.C., giving full particulars.

Information is wanted as to the following cases among others:—

1. Refusal of sick benefit when the proved incapacity to work is caused by pregnancy on the ground that this is not a disease. But the Act entitles to benefit for every "disablement" without specific disease; and Section 110 of the Commissioners' handbook explicitly recognises incapacity caused by the disablement of pregnancy as a valid ground for sickness benefit.

2. Restriction of sickness benefit in pregnancy and maternity to a maximum of four weeks. There is no limitation of sickness benefit in the Act for members of Approved Societies, apart from the 26 weeks' maximum.

3. Refusal to continue sickness benefit, when the doctor certifies incapacity to work, on the ground that the patient is found (1) breaking the rules for persons on benefit (thereby incurring a fine only); (2) doing light household work deemed by the doctor not harmful; (3) even "looking after her children."

4. Refusal of sickness benefit on the ground that, although unable to follow his own occupation, the patient is capable of "some" work. This amounts to a parody of the law, for no one is ever incapable of *any* work whatsoever, unless he is continuously unconscious. (Even the bedridden paralytic may knit, or pick peas, or write a book.)

5. Failure to provide the "adequate" medical attendance and treatment" guaranteed by the Act for all cases without any exception. Particulars are desired of all cases in which (1) panel doctors have required payment for services beyond the scope of their contract with the Insurance Committee; (2) panel doctors have been unable to give the treatment required—e.g., surgery, eye cases, &c.; (3) hospital treatment was required and not obtained; (4) the prescribed drugs or appliances have not been supplied free of charge; and (5) appliances not included in the Commissioners' list (trusses, elastic bandages, spectacles, crutches, &c.) have been required and refused.

6. Failure to provide what is required by tuberculosis patients, such as (1) inability to gain admission to sanatorium; (2) refusal of the necessary means of adequate domiciliary treatment, such as open-air sleeping arrangements or necessary ventilation; (3) refusal to allow nourishing food, such as milk and eggs, which the Act empowers the panel doctor to prescribe under certain circumstances.

7. Refusal of maternity benefit or of sickness in connexion therewith, on the ground of "misconduct"; or because of alleged breach of rules.

8. Expulsion from Approved Society, for instance, on ground of "withholding material information."

We are glad to say that the committee of the Fabian Research Department will welcome testimony on both sides, and would like to hear of equally illustrative cases in which, under the circumstances indicated above, benefits had been given or continued, and instances of their advantageous results.

### LIVERPOOL AND DISTRICT NON-PANEL UNION.

A well-attended meeting of the non-panel doctors of Liverpool and district was held at the Medical Institution on Nov. 25th, with the object of forming a local non-panel association to federate with organisations of a similar character throughout the country; also to elect delegates to attend the conference to take place for federation in London on Nov. 29th. Mr. J. E. O'Sullivan presided and Dr. Francis Heatherley acted as honorary secretary. It was decided to call the new organisation the "Liverpool and District Non-panel Medical Union." The justice of the principle of the Insurance Act was recognised and admitted, but the present working of the Act as affecting both the insured and the members of the medical profession was much criticised. It was unanimously resolved to continue to refuse to take any service under the Act until it was thoroughly amended in the interests of the insured and of the profession. The desirability of securing absolute free choice of doctor and permission to make own arrangements was particularly emphasised. Further alterations to the Act were discussed and advocated.

Mr. O'Sullivan was elected chairman, Mr. Damer Harrisson, vice-chairman, Dr. Francis Heatherley, honorary secretary and treasurer, and the following are the members of the executive committee: Mr. R. T. Bailey, Dr. V. C. de Boinville, Dr. F. Marshall, Dr. A. R. Macleay, Mr. G. H. Pinder, Mr. R. Ross Smith, Dr. G. Rogers, Dr. R. Turner, and Mr. C. V. Vereker. Mr. Damer Harrisson, Dr. Heatherley, Dr. Macpherson, and Mr. O'Sullivan were elected delegates to attend the non-panel conference to be held at the Waldorf Hotel, London, on Nov. 29th.

THE RESEARCH DEFENCE SOCIETY.—The following have lately become Vice-presidents of this society: Sir Hugh Bell, Sir John Brunner, the Dean of Ely, Lord Harlech, Sir John Prescott Hewett, Sir William Mather, Mr. H. S. Wellcome, and Mr. H. G. Wells.

# THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

TUESDAY, NOV. 25TH.

THE General Council of Medical Education and Registration commenced its winter session at its offices, 299, Oxford-street, to-day.

*Appointment of Temporary Chairman.*

Sir DONALD MACALISTER, the President, was unable to attend owing to illness. The first duty of the Council was therefore to appoint one of its members to take the chair temporarily.

Dr. NORMAN MOORE, in moving that Mr. Tomes, the senior treasurer, should take the chair in the absence of the President, said that the legal adviser of the Council had told him that the Council must in the circumstances appoint a chairman formally on each day of the session.

Sir HENRY MORRIS seconded.

The motion having been agreed to, Mr. TOMES formally took the chair.

*The President's Illness.*

Mr. TOMES said that a letter had been received from the President which the members of the Council would all very much deplore. His illness prevented him from attending this session of the Council. However, he would like to say that those who had been making preparations for the meetings of the Council had had the advantage of the President's advice on a great many questions. He had been well enough to give them advice and to take a keen interest in the business of this meeting. That had interested and amused him, and had certainly done him no harm, as the latest reports of his progress were most satisfactory.

A letter dated Nov. 17th and addressed to the Registrar by Sir Donald MacAlister was then read, stating and regretting his inability to be present at the meeting, when, on the proposal of Dr. Little, the following resolution was passed unanimously :—

That the Council have received with great regret the President's letter informing them of his serious illness and of his inability to preside at the present session. The Council cannot but feel that the President's unsparing devotion to his duties has contributed to break down his health. The members are rejoiced to hear that he is now making steady progress towards recovery, and they look forward with pleasure to the prospect of having the summer meeting presided over by him, with his usual conspicuous ability to the great advantage of their proceedings.

*New Members.*

Formal intimation was made that Dr. Lorrain Smith had resigned his post as representative of the Victoria University of Manchester on the Council, and that Dr. Grafton Elliot Smith had been appointed as the representative of that university for a period of two years.

Dr. ELLIOT SMITH, introduced by Dr. NORMAN MOORE, then took his seat.

*The late Sir John Batty Tuke.*

The CHAIRMAN (Mr. Tomes) said that the members of the Council regretted the loss caused by the death of Sir John Batty Tuke, who for a great many years had been a member of the Council. The Executive Committee had drafted this motion, which he would now propose :—

The members of the General Medical Council convey to the family of the late Sir John Batty Tuke an expression of sincere sympathy at the loss which they have sustained by his death, and they desire to place on record their high appreciation of his many services to the Council from his appointment in 1887 till his retirement in 1912, and in particular of his devoted labours as chairman of the Education Committee.

The motion was agreed to unanimously.

*Portraits of Past Members.*

The CHAIRMAN intimated that portraits of two past members of the Council had been forwarded to the Council for their acceptance. One of these was a portrait of Sir William Turner, their president for six years. Sir William in forwarding it intimated that it was a framed photogravure engraving of a portrait by Sir James Guthrie, P.R.S.A., recently presented to the University of Edinburgh. He asked the Council to accept it in memory of his long association with it as a member, and also of his association with it as president for six years. The other portrait was one of Lord Ilkeston, which was presented through Dr. Saundby. Members would see both portraits in the Council Chamber.

On the motion of Dr. NORMAN MOORE it was agreed to accept Sir William Turner's portrait, and to convey to him the thanks of the Council for his gift.

Dr. SAUNDBY expressed his conviction that the Council would accept with pleasure Lord Ilkeston's portrait, as he was one of the first directly elected representatives who had sat on the Council.

On the motion of Dr. NORMAN MOORE a vote of thanks was passed to Lady Ilkeston for the portrait, and to Dr. Saundby for his services in connexion with the gift.

*Service Competition Tables.*

Tables were presented showing the results of competitions for commissions in (1) the Naval Medical Service, (2) the Royal Army Medical Corps, and (3) the Indian Medical Service.

Sir CHARLES BALL moved, and Mr. HODSDON seconded, the following motion :—

That the thanks of the Council be conveyed to the Director-General of the Medical Department of the Royal Navy, the Director-General of the Medical Department of the Army, and the Under-Secretary of State for India respectively, for the returns which they have again furnished to the Council, with the request that such returns may in the future continue to be furnished to the General Medical Council.

The motion was agreed to.

*Restoration of Names to Register.*

After deliberation *in camerâ*,

The CHAIRMAN (Mr. Tomes) announced that the Council had directed the Registrar to restore to the Medical Register the names of James William Kelly and James Forrest, and to restore to the Dentists Register the names of Frederick Ellis and Edward Joseph Regan.

*The Education Committee.*

Dr. MACKAY, speaking as chairman of the Education Committee, said that the temporary list of the examinations qualifying for admission to the Students Register was drawn up last session. It would not be possible to put this list into its final form until next session, and the committee therefore held over their report on that subject until all the details could be presented to the Council.

*The Apothecaries' Hall, Dublin.*

Communications in reference to the Apothecaries' Hall, Dublin, were laid before the Council. On June 20th Dr. Little formally informed the President of the General Medical Council by letter that at a meeting of the Irish Branch Council Mr. Robert C. B. Maunsell, F.R.C.S. Irel., was nominated as assistant examiner for the Apothecaries' Hall, and Mr. John Magee Finny, M.D., was nominated as an inspector under Section 18 of the Medical Act, 1858. In another communication Dr. Little stated that Dr. Adye-Curran, on behalf of the Apothecaries' Hall, Dublin, had handed him a letter of protest. Dr. Adye-Curran wrote :—

As representing the Apothecaries' Hall of Ireland I beg to protest against your proposed action of appointing either an inspector or a surgical examiner to act in conjunction with the body which I represent, it being illegal for you to do so, that power alone being vested in the General Medical Council.

On receipt of those communications the President appointed Mr. Maunsell. The appointment was in the following terms :—

In pursuance of a resolution of the General Council of Medical Education and Registration of the United Kingdom, acting under Section 5 of the Medical Act, 1886, Robert C. B. Maunsell, F.R.C.S. Irel., has been appointed an Examiner in Surgery to assist at the qualifying examinations which are held by the Apothecaries' Hall of Ireland, and to perform the duties specified in the said section or otherwise prescribed under the provisions therein contained. The appointment continues for the four years beginning June 21st, 1913.

The President also appointed Dr. Finny, the appointment being notified in these terms :—

In pursuance of a resolution of the General Council of Medical Education and Registration of the United Kingdom, acting under Section 18 of the Medical Act, 1858, John Magee Finny, M.D., has been deputed to attend and be present at any of the examinations (other than the examinations in surgery) required to be gone through in order to obtain the qualification of Licentiate of the Apothecaries' Hall, Dublin, during the year beginning June 21st, 1913.

Dr. LITTLE moved that these communications should be entered on the minutes.

Sir CHARLES BALL seconded. He said that what had been done was only to carry out the instructions given to the Irish Branch Council last session.

Dr. ADYE-CURRAN asked whether Dr. Finny was really an inspector or a visitor. There seemed, he said, to have been a terrible confusion of ideas on the part of the Irish Branch Council. Inspectors were appointed under the Act of 1886, but the Irish Branch Council had appointed an inspector under the Act of 1858 which did not give any power to appoint inspectors.

Sir CHARLES BALL replied that it was perfectly clear under what conditions Dr. Finny was appointed. They were set out in terms in which the appointment had been notified. It was the case that it was only in the Act of 1886 that a special meaning had been applied to the word "inspector." Dr. Finny had not been appointed an inspector within the meaning of the Act of 1886.

Dr. ADYE-CURRAN said he was satisfied with the explanation that Dr. Finny was not an inspector.

The motion was then carried.

The CHAIRMAN, in announcing that that completed all the business which the Council could take this afternoon, remarked that he wished to acknowledge the very satisfactory arrangements for the business of the session in the absence of the President were due to the Registrar, Mr. King.

The Council then adjourned.

WEDNESDAY, NOV. 26TH.

The Council resumed its sitting at its offices, 299, Oxford-street, W. Mr. TOMES was again elected to occupy the chair for this day's sitting in the absence of the President. The Council was engaged entirely in the consideration of complaints against practitioners.

### MEDICAL RECIPROCITY WITH NEWFOUNDLAND.

The Executive Committee of the General Medical Council has adopted a resolution to the effect that the privileges accorded to medical practitioners of the United Kingdom under the Medical Acts of Newfoundland are such as to afford an equitable basis for the application to Newfoundland of Part II. of the Medical Act, 1886. This opinion will be communicated to the Privy Council, with whom it lies to take further steps in connexion with the establishment of medical reciprocity with Newfoundland.

# Medical News.

UNIVERSITY OF CAMBRIDGE.—The following medical and surgical degrees have been conferred:—

*M.D.*—B. A. I. Peters, Jesus.
*M.B.* and *B.C.*—R. Hodson, Pembroke, and J. B. Hance, Christ's.
*B.C.*—H. P. Comyn, King's.

The State Medicine Syndicate report that they have held two examinations in sanitary science during the year that is now closing. At the April examination 44 candidates presented themselves, 19 of whom were successful in both parts and received diplomas. At the October examination 42 candidates presented themselves, of whom 19 were successful in both parts and received diplomas. The syndicate have held two examinations in tropical medicine and hygiene during the year. At the January examination 20 candidates presented themselves, 14 of whom were successful and received diplomas. At the August examination 12 candidates presented themselves, seven of whom were successful and received diplomas.

UNIVERSITY OF LONDON.—At examinations held recently the following candidates were successful:—

THIRD (M.B., B.S.) EXAMINATION.

*Honours.*—*‡Hugh James Orr Ewing (University Medal), University of Bristol; ‡Henry Little Hardy Greer, Queen's University, Belfast; †Alfred Ernest Hallinan, Charing Cross Hospital; *Leslie Mordaunt Ladell and ‡Alexander Croydon Palmer, London Hospital; and *Charles Edgar Thornton, Middlesex Hospital.

* Distinguished in Medicine. † Distinguished in Pathology.
‡ Distinguished in Midwifery and Diseases of Women.

*Pass.*—John Appleyard, University College Hospital; Cuthbert Hastings Attenborough, King's College Hospital; Margaret Mary Basden, London (Royal Free Hospital) School of Medicine for Women; Alured Charles Lowther O'S. Bilderbeck, St. Bartholomew's Hospital; George Francis Bradley, London Hospital; Albert James Clarke, St. Bartholomew's Hospital; Raymond John Clausen, Westminster Hospital; Frederick William Theodore Clemens, University of Bristol; John Archer Cowan, University College Hospital; Jules Maurice Curé, St. Bartholomew's Hospital; John Prosser Davies, University College, Cardiff, and St. Mary's Hospital; Richard Denis Davy, London Hospital; Sheldon Francis Dudley, St. Thomas's Hospital; William Halley Eggar, Middlesex Hospital; Pattie Ruth Elliott, London (Royal Free Hospital) School of Medicine for Women; Abraham Solomon Erulkar, Guy's Hospital; Douglas Medlicott Gibson, St. Thomas's Hospital; Cyril Ernest Ambrose Goddard, University College Hospital; Charles Frederick Hacker, King's College Hospital; Claude Charles Harrison, University of Bristol; George Murray Heiron, Philip Henry Henson, and Melville Hocken, London Hospital; Thomas Herbert Holroyd, University of Birmingham; James Moncrieff Joly, Guy's Hospital; William Howard Jones, St. Bartholomew's Hospital; Thomas Pomfret Kilner, Victoria University of Manchester; William Leslie, Charing Cross Hospital; Muriel Annie Lloyd and Margaret Josephine McEnery, London (Royal Free Hospital) School of Medicine for Women; Guy Matthews, King's College Hospital; Henry Brice Parker, London Hospital; Hilda Margaret Pollard, London (Royal Free Hospital) School of Medicine for Women; William James Aitken Quine, Victoria University of Manchester; Henry Martin Rashbrook and Aneurin Evan Roberts, London Hospital; Arthur Denys Rope, Middlesex Hospital; Douglas Ross, London Hospital; Arthur Leonard Shearwood, Guy's Hospital; Hector Smith, Charing Cross Hospital; Ernest Nedwons Snowden, St. Bartholomew's Hospital; Edward Seguier Sowerby, University of Bristol; James Vaughan-James, Charing Cross Hospital; Harry Bertram Walker, London Hospital; Edgar William Whiting, St. Bartholomew's Hospital; and Gerald Whittington, St. Bartholomew's Hospital and Charing Cross Hospital.

The following candidates have passed in one of the two groups of subjects:—

*Group I.*—Thomas Izod Bennett, Guy's Hospital; Mabel Kate Bishopp, London (Royal Free Hospital) School of Medicine for Women; George Maclean Campbell, University of Bristol; Aaron Simeon Cohen, Westminster Hospital; Meherjibhoy Bomanji Cooper, University College Hospital; Wilfrid Egerton Milligan, St. Thomas's Hospital; and Bernard Woodhouse, University College Hospital.

*Group II.*—Francis Cooke Alton, St. Thomas's Hospital; John Bostock, London Hospital; Lancelot Gerard Bourdillon, George James Bowen, and Arthur Rawdon Carrington Doorly, St. Thomas's Hospital; Henry William Evans and Charles Hamilton Gould, Guy's Hospital; Frank Arthur Grange, London Hospital; William Edward Kingdon and Leon Levene, University College Hospital; Robert John McNeill Love, London Hospital; Ethel May Magill, London (Royal Free Hospital) School of Medicine for Women; William John Morris, University College, Cardiff, and University College Hospital; Julian Lionel Priston, London Hospital; Maitland Radford, University College Hospital; Cedric Sydney Lane Roberts, Guy's Hospital; William Simpson, St. Bartholomew's Hospital; John Smith Sloper, St. Thomas's Hospital; Francis Gerald Augustus Smyth, St. Bartholomew's Hospital; Henry James Drew Smythe, University of Bristol; Harold Webb, Guy's Hospital; and Aubrey Harrison White, University of Bristol.

N.B.—This list, published for the convenience of candidates, is issued subject to its approval by the Senate.

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held recently the following candidates passed in the subjects indicated:—

*Surgery.*—H. V. Capon (Sections I. and II.) and W. R. Sadler (Sections I. and II.), St. Bartholomew's Hospital; and H. C. Wright (Section II.), Manchester.
*Medicine.*—G. F. Malden (Section I.), Royal Free Hospital; B. C. Piercy (Sections I. and II.), Leeds; D. Schonken (Sections I. and II.), Amsterdam; and W. Smith (Section I.), Durham.
*Forensic Medicine.*—C. Bluett, London Hospital; and A. K. S. Wyborn, Middlesex Hospital.
*Midwifery.*—E. M. D. N. Baker, Brussels; L. Baumgarten, Berne and London Hospital; C. Bluett, London Hospital; B. C. Piercy, Leeds; and D. Schonken and J. D. Schonken, Amsterdam.

The Diploma of the Society was granted to the following candidates, entitling them to practise medicine, surgery, and midwifery: W. R. Sadler and H. C. Wright.

LITERARY INTELLIGENCE.—Mr. H. K. Lewis's quarterly list contains the names of new books and new editions published between July and September on medical and surgical topics and allied subjects. Among the new books are Rosenau's "Preventive Medicine," Lockwood's "Diseases of the Stomach," Leonard Rogers's "Dysenteries," and new editions of many well-known works, such as Gray's "Anatomy," Eyre's "Bacteriological Technique," Muir and Ritchie's "Bacteriology," McMurrich's "Development of the Human Body," Lee's "Microtomist's Vade Mecum," Halliburton's "Physiology," Binnie's "Operative Surgery," and others. A useful feature is the brief notice of contents given.

SOCIETY OF MEDICAL OFFICERS OF HEALTH: SCHOOL MEDICAL OFFICERS.—The next meeting of the School Medical Service group of the Society of Medical Officers of Health will be held on Saturday, Dec. 6th, at 2 P.M., at the Royal Sanitary Institute, 90, Buckingham Palace-road, London, S.W., and not at 1, Upper Montague-street, Russell-square, W.C., as previously announced. After formal business the subjects for discussion will be the adequate remuneration and travelling and extra expenses of chiefs and assistants in the service, their increased duties,

the want of security of tenure, and the advisability of sending a request to the Board of Education to receive a deputation to submit grievances. All officers in the School Medical Service are invited to attend this meeting, and communications should be made to the Honorary Secretary of Group, Medical Department, Education Office, Council House, Birmingham.

RADCLIFFE INFIRMARY, OXFORD.—On Wednesday, Nov. 26th, after a luncheon in the hall of Queen's College, presided over by the Provost of Queen's, a large company assembled in the new out-patient's waiting hall of the Radcliffe Infirmary, under the chairmanship of the treasurer, the Rev. G. B. Cronshaw. The new buildings, which include casualty, out-patient, pathological, and special departments, were formally declared open in an admirable speech by the Chancellor of the University, Earl Curzon. The other speakers were Sir William Osler, regius professor of medicine; the Mayor of Oxford; Sir Henry Burdett; and Mr. H. P. Symonds, senior surgeon to the hospital. The cost of building and equipping the new wing in accordance with modern medical requirements has been borne out of the large sum bequeathed to the Radcliffe Infirmary by the late Mr. John Briscoe, for many years a member of the honorary medical staff. Among those who visited Oxford to attend the opening ceremony were Sir T. Clifford Allbutt, regius professor of physic in the University of Cambridge; Dr. J. A. Ormerod, registrar of the Royal College of Physicians of London; Dr. Archibald Garrod, physician to St. Bartholomew's Hospital; Dr. T. D. Acland, consulting physician to St. Thomas's Hospital; Dr. H. D. Rolleston, physician to St. George's Hospital; and the Rev. J. B. Lock, treasurer of Addenbrooke's Hospital, Cambridge.

NATIONAL DENTAL HOSPITAL.—The annual dinner of past and present students of the National Dental Hospital was held at the Trocadéro Restaurant on Nov. 21st, Professor Arthur S. Underwood being in the chair. Among those present besides members of the college staff were Mr. L. R. Thomas and Dr. F. J. Poynton, secretary and Vice-Dean respectively of University College Hospital Medical School; Mr. Charles W. Glassington, Dr. Dudley Buxton, Mr. J. F. Colyer, Dr. Wright; Mr. Walter G. Spencer, Mr. W. H. Dolamore, and Mr. M. F. Hopson, examiners at the Royal College of Surgeons; Dr. A. Smith Woodward, F.R.S., Mr. J. Howard Mummery, Mr. Rees Price, Mr. C. F. Rilot, Mr. T. A. Coysh, Mr. F. J. Pearce, Mr. Macleod Yearsley, Mr. H. J. W. Martin, and Mr. Gerald T. Buckle, secretary of University College Hospital. Professor Underwood, who proposed the toast of "The National Dental Hospital and College," read a humorous letter from "an eminent dental authority," in which the writer stated that the facts concerning the Piltdown mandible as ascertained by the writer showed that the owner of the mandible was, without doubt, an extractor and adapter (a dental quack) of the period, and that the canine tooth found in the vicinity was that of an anthropoid used for exhibiting to his patients when, having broken a tooth, he was challenged to show the tooth he had extracted. He had been killed by an infuriated patient who had discovered the deception. In regard to dental education, Professor Underwood urged that it should be as broad, not as narrow, as possible. It was often asked why students needed to be taught all this surgery. But a wide knowledge of broad principles was necessary. It was not possible to hack off a bit of a human being and regard it as a special and isolated field of practice. Again, the question, Why are we taught all this anatomy? had been answered by his right-hand neighbour (Dr. Woodward), who had shown actual nerve terminations penetrating dentine. As to comparative anatomy, everyone was better for allowing his mind to travel from a narrow rut to the romantic side of things. In this connexion he urged them all to read Pycroft's recent book, "On the Courtship of Animals." The Dean, Mr. S. Spokes, in replying, was optimistic, and said that things were going favourably with the school. The prize certificates were then distributed. The President deputed his son, Mr. Bayford Underwood, to propose the toast of "The Past and Present Students," which was responded to by Mr. Ashley W. Smith and Mr. Austin H. Hutson. The Dean proposed the toast of "The Visitors," for whom Mr. Mummery responded, and the Vice-Dean, Mr. Kenneth Goadby, that of "The Chairman." An admirable singing programme was given by Miss Olive Fox, Mr. Stewart Gardner, and Mr. Rex Harold respectively, and some excellent sleight-of-hand illusions were furnished by Mr. Leslie Lambert.

THE death of Dr. Clement Godson, consulting physician to the City of London Lying-in Hospital, occurred in London on Wednesday last.

A CENTENARIAN.—Captain David Jackson, an inmate of the Tooting Home, celebrated the 105th anniversary of his birthday on Nov. 19th. He is a native of Lynn.

MEDICAL BATHS FOR TORQUAY.—At the last meeting of the Torquay town council a tender was accepted for £14,912 for providing medical baths and a swimming bath at the Bath Saloon.

Dr. T. J. Jehu will deliver the Swiney lectures on Geology for 1913, in connexion with the British Museum (Natural History), on Mondays, Tuesdays, and Saturdays, beginning on Nov. 29th and ending on Dec. 23rd. The subject of the course is the Natural History of Minerals and Ores.

DONATIONS AND BEQUESTS.—Under the will of the late Mr. S. Simmelkjoer a sum of about £15,000 will be divided between six charitable institutions, including the Middlesex Hospital, the Westminster Hospital, and the Great Northern Central Hospital.—Sir William Tate, Bart., and Mr. Edwin Tate, J.P., have given £1600 and £900 respectively, the cost of a nurses' home in connexion with the West Ham and Eastern General Hospital.—Among legacies received recently by the governors of the Brompton Hospital are £5000 from the late Sir William Dunn, Bart.; £1000, duty free, from the late Miss Alice Sarah Price; and £1000 from the late Miss Hannah Elizabeth Gartside.

VICTORIA UNIVERSITY OF MANCHESTER: A RESEARCH LABORATORY FOR ENTOMOLOGY.—On Nov. 13th Sir Sydney Olivier, Permanent Secretary to the Board of Agriculture, opened the Laboratory for Agricultural Entomology at the University of Manchester. This laboratory is officially recognised by, and is part of the scheme of, Mr. Runciman, the President, for the promotion of scientific research in agriculture. Manchester has already done most valuable work in the practical and scientific aspects of entomology, and this has become the recognised institution for research work in agricultural entomology.

ROYAL DENTAL HOSPITAL OF LONDON.—The annual dinner of the staff and past and present students of this hospital was held in the Whitehall Rooms of the Hotel Métropole, London, on Nov. 22nd, Mr. Rees Price occupying the chair. The usual loyal toasts having been honoured, the Chairman proposed "The Past and Present Students of the Royal Dental Hospital and the Dental School." He said that the progress of the hospital was parallel with that of dental science. He referred to the increasing facilities that had taken place during past years for instruction in dental surgery and practice. In the early "eighties" there were only two dental schools in the country. London now possessed four, and there were many schools in the large cities and provincial towns. He regarded with pride the fact that the early schools had laid the foundations of healthy development in dental education. Mr. T. A. Coysh, representing the old students, referred in an excellent speech to the happy time which the past students recognised they had spent during their training at the hospital. There he had made his best friends, and the retrospect was always most pleasant. He urged upon his colleagues the desirability of organisation in connexion with their mutual interests, and to be prepared for the possibility of a State interference in regard to dental practice. He realised the importance of the post-graduate lectures at the hospital, but suggested that it would be valuable if the authorities could see their way to introduce a course on business methods. He thought that as a rule the professional man possessed a very imperfect knowledge of business principles and business demands. Mr. A. L. Packham, replying on behalf of the present students, recorded in a speech on which he was rightly congratulated, his appreciation of the services of the hospital staff and teachers. The Dean,

Mr. W. H. Dolamore, following, referred to the changes recently made in the staff and to a recent decision to create a new post, that of registrar, whose duty amongst other things would be to keep a record of the wealth of clinical material which passed through the hospital. He hoped that this duty would be combined with research. Much of the school's success was due to the loyal support of old students, who had contributed no less a sum than £15,000 to the needs of the new buildings. He appreciated, with them, the admirable policy of the managing committee to secure good teaching and training in all the departments of dental work. The toast of "The Visitors" was proposed by Mr. F. Coleman, and was responded to by Professor A. Keith and Mr. Walter C. Hale. Finally, the toast of "The Chairman" was proposed by Mr. C. F. Rilot, to which Mr. Rees Price replied in graceful terms of acknowledgment. During the evening an excellent musical entertainment was given, the programme including two numbers by "the hospital quartet" (Messrs. Gow, Metcalf, Thurston, and Williams).

## BOOKS, ETC., RECEIVED.

BAILLIÈRE, J. B. ET FILS, Paris.

Les Actualités Médicales. Le Pneumothorax Artificiel dans le Traitement de la Tuberculose Pulmonaire. Par le Dr. Léon Bernard, Professeur agrégé à la Faculté de Médecine de Paris, Médecin de l'Hôpital Laennec. Price Fr. 1.50.

BALE (JOHN), SONS, AND DANIELSSON, LIMITED, London.

Tropical Medicine and Hygiene. By C. W. Daniels, M.B. Cantab., F.R.C.P. Lond., Lecturer on Tropical Diseases, London Hospital. In Three Parts. Part I. Diseases due to Protozoa. Second edition. Price 7s. 6d. net.

BLAKISTON'S (P.) ON AND CO., 1012, Walnut-street, Philadelphia.

Modern Problems of Biology. Lectures delivered at the University of Jena, December, 1912. By Charles Sedgwick Minot, LL.D., Yale, Toronto, and St. Andrews, D.Sc. Oxford, Director of the Anatomical Laboratories, Harvard Medical School. Price $1.25 net.

CHURCHILL, J. AND A., London.

The Diseases of Children. By Sir James Frederic Goodhart, Bart., M.D., LL.D. Aberd., F.R.C.P., Consulting Physician to the Evelina Hospital for Sick Children. Tenth edition. Edited and revised by George Frederic Still, M.A., M.D., F.R.C.P., Professor of Diseases of Children, King's College, London. Price 16s. net.

The Ideals and Organisation of a Medical Society. By Jamieson B. Hurry, M.A., M.D., Author of "A History of the Reading Pathological Society." Price 2s. net.

DORNAN, WILLIAM J., Philadelphia.

Hospital of the Protestant Episcopal Church in Philadelphia. Medical and Surgical Reports of the Episcopal Hospital. Volume I. Edited by Dr. Astley P. C. Ashhurst. Price not stated.

FISCHER, GUSTAV, Jena.

Handbuch der Gesamten Therapie. In sieben Bänden. Herausgegeben von Dr. F. Penzoldt, Professor in Erlangen, und Dr. R. Stintzing, Professor in Jena. Fünfte Auflage. Lieferung 2. Price M.3.50.

Studien zur Pathologie der Entwicklung. Herausgegeben von Dr. Robert Meyer, Professor, Prosektor an der Universitäts-Frauenklinik in Berlin, und Dr. Ernst Schwalbe, Professor, Direktor des Pathologischen Instituts in Rostock. Erster Band, erstes Heft. Price M.8.

Ueber Histologie und Pathogenese der circumskripten Muskelverknöcherung (Myositis ossificans circumscripta). Von Dr. Georg B. Gruber, II. Assistenten am pathologischen Institute der Kaiser Wilhelms-Universität in Strassburg i.E. Price M.4.50.

FROWDE, HENRY, AND HODDER AND STOUGHTON, London.

The Elements of Bandaging and the Treatment of Fractures and Dislocations. By William Rankin, M.A., M.B., Ch.B., Dispensary Surgeon, Western Infirmary, Glasgow. Price 5s. net.

HIS MAJESTY'S STATIONERY OFFICE, London. (To be purchased, either directly or through any Bookseller, from WYMAN AND SONS, LIMITED, London and Cardiff; or H.M. Stationery Office (Scottish Branch), Edinburgh; or E. PONSONBY, LIMITED, Dublin; or from the Agencies of T. FISHER UNWIN, London.)

For Official Use. First Aid in the Royal Navy. Price 9d.

IMPRENTA DE SAN FRANCISCO DE SALES, Calle de la Bola, 8, Madrid.

Sobre las Fracturas del Fémur y su Tratamiento. Por el Doctor Saturnino García Hurtado. Price not stated.

KING, P. S., AND SON, Orchard House, Westminster, London, S.W.

A Guide to the Mental Deficiency Act, 1913. By John Wormald (Solicitor, for many years Chairman of Industrial Schools and the Special Schools, Boarding-out and Care Committees for the Mentally Defective in Leeds), and Samuel Wormald. With a Preface by T. Edmund Harvey, M.P. (Warden's Lodge, Toynbee Hall). Price 5s. net.

The Ratan Tata Foundation (University of London). The Health and Physique of School Children. By Arthur Greenwood. With an Introductory Note by the Director of the Ratan Tata Foundation. (Published for the Ratan Tata Foundation, London School of Economics, Clare Market, Kingsway, London, W.C.) Price 1s. net.

LEGRAND, AMÉDÉE, 36, Rue Serpente, Paris.

Les Hystérotomies Vaginales en Obstétrique. Par le Docteur André Wilhelm de la Faculté de Médecine de Paris, Ancien Interne des Hôpitaux de Paris. Price not stated.

LEHMANN, J. F., Munich.

Jahresbericht der Gesellschaft für Natur- und Heilkunde in Dresden. Sitzungsperiode 1912-13 (Oktober, 1912, bis Mai, 1913). Redaktion geschlossen 14. VIII. 13. Ausgegeben 1.X.13. Price not stated.

LEWIS, H. K., London.

Lectures on Medical Electricity to Nurses. An Illustrated Manual. By J. Delpratt Harris, M.D. Durh., M.R.C.S., Senior Surgeon and Honorary Medical Officer in Charge of the Electrical Department, Royal Devon and Exeter Hospital. Price 2s. 6d. net.

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Dictionary of German and English, English and German. By Max Bellows. Proofs revised by Clarence Sherwood, Ph.D. Berlin, and Wilhelm Johann Eggers, M.A. Lond. Price, cloth, 6s. net.

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A Manual of Surgical Treatment. By Sir W. Watson Cheyne, Bart., C.B., D.Sc., LL.D., F.R.C.S., F.R.S., and F. F. Burghard, M.S. Lond., F.R.C.S. New edition. Entirely revised and largely rewritten, with the assistance of T. P. Legg, M.S. Lond., F.R.C.S., and Arthur Edmunds, M.S. Lond., F.R.C.S. In five volumes. Vol. V. Price 21s. net.

A Dictionary of Applied Chemistry. By Sir Edward Thorpe, C.B., LL.D., F.R.S., Emeritus Professor of Chemistry, Imperial College of Science and Technology, South Kensington, London. Assisted by Eminent Contributors. Revised and enlarged edition. Vol. V. Price 45s. net.

MACMILLAN AND CO., LIMITED, London.

The Life of Florence Nightingale. By Sir Edward Cook. In two volumes. Vol. I., 1820-1861; Vol. II., 1862-1910. Price 30s. net.

Feeding and Care of Baby. By F. Truby King, M.B., B.Sc. (Public Health) Edin. Issued by the Society for the Health of Women and Children. Price 1s. net.

MARCUS (A.) UND WEBERS (E.) VERLAG (Dr. jur. ALBERT AHN), Bonn.

Kurzer Leitfaden der Psychiatrie. Für Studierende und Aerzte. Von Dr. Ph. Jolly, Assistenten an der Psychiatrischen und Nervenklinik (Geh.-Rat Prof. Anton) in Halle a.S. Price, paper, M.4.; bound, M.4.80.

MITTLER, ERNST SIEGFRIED, UND SOHN, Kochstrasse, 68-71, Berlin.

Medizinal-Berichte über die Deutschen Schutzgebiete: Deutsch-Ostafrika, Kamerun, Togo, Deutsch-Südwestafrika, Deutsch-Neuguinea, Karolinen, Marshall- und Palau-Inseln, und Samoa, für das Jahr 1910/11. Price, paper, M.10; bound, M.11.

NORTH, JOHN, Office of the "Dairy World and British Dairy Farmer," 98 and 99, Fetter-lane, London, E.C.

Farm and Creamery Buttermaking and Students' Reference Book. Third Revision. A Practical Treatise for Buttermakers and Students. By C. W. Walker-Tisdale, F.C.S., Managing Director of the Wensleydale Pure Milk Society, Ltd., Northallerton, and Theodore R. Robinson, F.S.I., late Lecturer in Agriculture, Dairying and Poultry-keeping at the South-Eastern Agricultural College (University of London), Wye, Kent. Price 3s. 6d. net.

PERLES, MORITZ, Seilergasse, 4, Wien, I.

Der Blutdruck des Menschen; Ergebnisse der Tonometrie. Von Dr. Arthur Horner, em. Assistent der I. medizinische Abteilung des k.k. Allgem. Krankenhauses in Wien. Mit einem Vorwort von Prof. Dr. J. Pal. Price K.6.

REIMER, GEORG, Genthinerstrasse, 38, Berlin, W.

Der Vertrieb pharmazeutischer und kosmetischer Spezialitäten in Deutschland. Von Ernst Rosenberg. (Einzelwirtschaftliche Abhandlungen. Herausgegeben von Friedrich Leitner, Professor der Handelswissenschaft an der Handels-Hochschule zu Berlin. Heft I.) Price M.1.75.

RICHARDS, GRANT, LIMITED, 7, Carlton-street, London, S.W.

Publications of the Bureau of Social Hygiene. Commercialised Prostitution in New York City. By George J. Kneeland. With a Supplementary Chapter by Katharine Bement Davis, Superintendent of the New York State Reformatory for Women. Introduction by John D. Rockefeller, Jr., Chairman of the Bureau of Social Hygiene. Price 7s. 6d. net.

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The Vital Balance. A Short Survey of Some of the More Important Aspects of Health. By Albert Gresswell, M.A., M.D. Oxon., M.R.C.S., and George Gresswell, M.A. Oxon., L.R.C.P. & S.E. Price 2s. net.

Hypnotism: Its History, Practice, and Theory. By J. Milne Bramwell, M.B., C.M. Third and cheaper edition. Price 12s. 6d. net.

SCIENTIFIC PRESS, LIMITED, London.

Transactions of the British Hospitals Association. Fourth Annual Conference, held at Oxford, June 26th and 27th, 1913. (Reprinted from *The Hospital*.) Price not stated.

SIMPKIN, MARSHALL, HAMILTON, KENT, AND CO., LIMITED, London.

Carbon Dioxide Snow: its Therapeutic Uses. Methods of Collection and Application. By J. Hall-Edwards, L.R.C.P., F.R.S. Edin., Hon. F.R.P.S., Senior Officer in Charge of the X-Ray Department at the General Hospital, Birmingham. Price 3s. 6d.

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The South African Scene. By Violet R. Markham. Price 7s. 6d. net.

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The Land that is Desolate. An Account of a Tour in Palestine. By Sir Frederick Treves, Bart., G.C.V.O., C.B., LL.D. Popular edition. Price 6s. net.

Dictionary of National Biography. Second Supplement. Index and Epitome. Edited by Sir Sidney Lee. Price, cloth, 3s. 6d. net.

SPRINGER, JULIUS, Berlin.

Beiträge zur Frage nach der Beziehung zwischen klinischem Verlauf und anatomischen Befund bei Nerven und Geisteskrankheiten. Bearbeitet und herausgegeben von Franz Nissl, Heidelberg. Erster Band. Heft 1. Price, paper, M.2.40.

Wandlungen der Medizin in Wissenschaft und Praxis. Von Professor Dr. H. Quincke, Kiel-Frankfurt a.M. Price M.1.

SUTTLEY AND SILVERLOCK, LIMITED, Blackfriars-road, London, S.E.

Diet Charts. For the Use of Physicians. Second edition. Part I. (Fevers, &c.; Convalescence and Dyspepsia; The Nursing Mother; Infant Feeding; Constipation.) Price 1s. net. Part II. (Bright's Disease; Diabetes and Glycosuria; Rheumatism; Phthisis; The Feeding of School Children.) By J. Craik Taylor, M.B. Price 1s. net.

THIEME, GEORG, Leipzig.

Monographien über die Zeugung beim Menschen. Von Dr. med. Hermann Rohleder, Sexualarzt in Leipzig. Band III.: Die Funktionsstörungen der Zeugung beim Manne. Price, paper, M.5.80; bound, M.6.80.

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WILLIAMS AND NORGATE, London. HENRY HOLT AND CO., New York. WILLIAM BRIGGS, Toronto.

Nerves. By David Fraser Harris, M.D., C.M., B.Sc. Lond., D.Sc. Birm., F.R.S.E., Professor of Physiology in the Dalhousie University, Halifax, Nova Scotia. Price 1s. net.

# Appointments.

*Successful applicants for vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to* THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ARMITAGE, W. S., M.R.C.S., L.R.C.P. Lond., has been appointed Junior Obstetric Oncer at St. Mary's Hospital.

BEARN, F. A., M.B., Ch.B. Vict., has been appointed House Physician at the Manchester Royal Infirmary.

BENTZ, F. C., M.B., Ch.B. Vict., has been appointed House Physician at the Manchester Royal Infirmary.

BENNETT, J. G., M.B., Ch.B. Vict., has been appointed Senior House Surgeon at the Manchester Royal Infirmary.

BOURNE, A. W., M.B., B.C. Cantab., has been reappointed Obstetric Registrar at St. Mary's Hospital.

COLE, P. C., M.R.C.S., L.R.C.P. Lond., has been appointed Third House Surgeon at the Great Northern Central Hospital.

COPLANS, E., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon at Bolingbroke Hospital, Wandsworth Common, S.W.

COUCHMAN, H. J., M.B., B.C. Cantab., has been appointed Second House Surgeon at the Great Northern Central Hospital.

CRAWSHAW, C. H., M.R.C.S., L.R.C.P. Lond., has been appointed Junior House Surgeon at the Manchester Royal Infirmary.

CUTHBERT, HAZEL H., M.B., B.S. Lond., has been appointed Assistant Clinical Pathologist to the Royal Free Hospital.

DAVIES, H. MORRISTON, F.R.C.S. Eng., has been appointed Honorary Surgeon to the City of London Hospital for Diseases of the Chest, Victoria Park, E.

ELPHICK, G. J. F., M.R.C.S., L.R.C.P. Lond., has been reappointed Senior Clinical Assistant to the Nose, Throat, and Ear Department at St. Mary's Hospital.

ENGINEER, S. K., M.R.C.P. Edin., has been appointed Honorary Assistant Physician to the Sir Jamsetjee Jeejeebhoy Hospital, Bombay.

FAIRBANK, H. A. T., M.B., B.S. Lond., has been appointed Surgeon to In-patients at the Hospital for Sick Children, Great Ormond-street.

FURNESS, HAROLD S., M.D., B.S. Lond., has been appointed House Surgeon at the Royal Free Hospital.

GOW, JOHN, M.B., Ch.B. Vict., has been appointed Surgical Registrar to the Manchester Royal Infirmary.

GRAHAM, W. P. G., M.B., M.R.C.S., has been appointed an Inspector of Vivisection under the Cruelty to Animals Act.

HOOTON, W. A., M.R.C.S., L.R.C.P. Lond., L.D.S.R.C.S. Eng., has been appointed Honorary Consulting Dental Surgeon to the Manchester Royal Infirmary.

HUTCHINSON, H. F., M.B., Ch.B. Vict., has been appointed Junior House Surgeon at the Manchester Royal Infirmary.

IDRIS, A. E., M.R.C.S., L.R.C.P. Lond., has been appointed Senior House Physician at the Great Northern Central Hospital.

JAMESON, G. B., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to Special Departments at the Manchester Royal Infirmary.

LANE, Sir W. ARBUTHNOT, M.S. Lond., F.R.C.S. Eng., has been appointed Emeritus Surgeon at the Hospital for Sick Children, Great Ormond-street.

LONG, E. G., L.D.S.R.C.S. Eng., has been appointed Acting Dental Surgeon to the Manchester Royal Infirmary.

MULLIGAN, U. J. G., M.B., Ch.B. Belf., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Abersychan District of the county of Monmouth.

REID, W. J., M.B., Ch.B., has been reappointed Director of the Cancer Research Laboratory at the Manchester Royal Infirmary.

ROGERS, G. F., M.D. Cantab., has been appointed an Inspector of Vivisection under the Cruelty to Animals Act.

SHATTOCK, C. E., M.D., B.S. Lond., F.R.C.S. Eng., has been appointed Resident Medical Officer at the Great Northern Central Hospital.

SQUIRE, J. EDWARD, C.B., F.R.C.P. Lond., has been appointed Consulting Physician to the Mount Vernon Hospital.

STEADMAN, F. ST. J., D.P.H., M.R.C.S., L.R.C.P. Lond., L.D.S., has been appointed Assistant Dental Surgeon to the West London Hospital.

STOCKS, A. V., M.B., Ch.B. Vict., has been appointed House Physician at the Manchester Royal Infirmary.

TOMLINSON, H. E., M.R.C.S., L.R.C.P. Lond., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

VINTER, C. H. S., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer and Public Vaccinator for the Framlingham District of the Plomesgate Union.

WARBURTON, G. B., M.B., Ch.M. Vict., F.R.C.S. Eng., has been reappointed Resident Medical Officer at the Barnes Convalescent Hospital, Cheadle.

WATERMEYER, H. A., M.R.C.S., L.R.C.P. Lond., has been appointed Clinical Assistant to the Nose, Throat, and Ear Department at St. Mary's Hospital.

WILLIS, H. D., M.B., Ch.B. Vict., has been appointed Senior House Surgeon at the Manchester Royal Infirmary.

WILSON, C. M., M.D., B.S. Lond., has been appointed Casualty Physician to St. Mary's Hospital.

# Vacancies.

*For further information regarding each vacancy reference should be made to the advertisement (see Index).*

ARGYLE AND BUTE ASYLUM, Lochgilphead.—Assistant Medical Officer, unmarried. Salary £200 per annum, with apartments, board, and laundry.

BATH, ROYAL MINERAL WATER HOSPITAL.—Resident Medical Officer. Salary £120 per annum, with lodging, board, and washing.

BELGRAVE HOSPITAL FOR CHILDREN, Clapham-road, S.W.—House Physician, also House Surgeon for six months. Salaries at rate of £75 per annum, with board, residence, &c.

BIRMINGHAM, ROYAL ORTHOPÆDIC AND SPINAL HOSPITAL, Newhall-street.—Clinical Assistant. Salary £25.

BOLTON UNION, TOWNLEYS HOSPITALS, Farnworth, near Bolton.—Resident Assistant Medical Officer. Salary £170 per annum, with apartments, washing, and attendance.

BRISTOL ROYAL INFIRMARY.—House Surgeon for six months for Throat, Nose, and Ear. Salary £75 per annum, with board, apartments, and laundry.

CAMBRIDGESHIRE COUNTY COUNCIL.—Female Assistant County Medical Officer. Salary £300 per annum.

CANCER HOSPITAL, Fulham-road, S.W.—Assistant in Chemical Department Research Institute. Salary £200 per annum.

CARDIFF, KING EDWARD VII.'s HOSPITAL.—Two Honorary Assistant Physicians. Also Senior Resident Medical Officer. Salary £120 per annum, with board, washing, and apartments.

CARMARTHEN, JOINT COUNTIES ASYLUM.—Second Assistant Medical Officer. Salary £180 per annum, with board, lodging, washing, &c.

CHESTER, COUNTY ASYLUM.—Third Assistant Medical Officer, unmarried. Salary £180 per annum, with board, lodging, and washing.

CHESTER GENERAL INFIRMARY.—House Surgeon. Salary £100 per annum, with residence and maintenance.

COLCHESTER, ESSEX COUNTY HOSPITAL.—House Physician. Salary £100 per annum, with board, residence, and washing. Also House Surgeon. Salary £100 per annum, with board, washing, and residence.

COVENTRY AND WARWICKSHIRE HOSPITAL, Coventry.—House Physician. Salary £110 per annum, with residence, board, laundry, and attendance.

CROYDON, COUNTY BOROUGH OF.—Assistant Medical Officer of Health and Assistant School Medical Officer. Salary £300 per annum.

DEVIZES, WILTS COUNTY ASYLUM.—Medical Superintendent. Salary £800 per annum, with partly furnished house, coal, light, washing, &c.

DINAS MAWDDWY BOARD OF GUARDIANS.—Medical Officer, &c. Salary about £110 per annum.

DORCHESTER, COUNTY ASYLUM.—Third Assistant Medical Officer. Salary £200 per annum, all found.

DORCHESTER, DORSET COUNTY HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with residence, board, and laundry.

DOUGLAS, NOBLE'S HOSPITAL, ISLE OF MAN.—Resident House Surgeon, unmarried. Salary £100 per annum, with board and washing.

DUMFRIES AND BURGHS, COUNTY OF.—Two Medical Assistants to Medical Officer of Health and School Medical Officer. Salary £250 per annum.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—House Physician. Salary at rate of £75 per annum, with board, residence, laundry, &c. Also Assistant Physician to Out-patients. Also Physician on Staff of Hospital. Also Medical Officer to the Casualty Department for six months. Salary at rate of £100 per annum, with luncheon and tea.

EAST SUSSEX COUNTY COUNCIL EDUCATION COMMITTEE.—Junior Assistant School Medical Officer. Salary £250 per annum.

GLASGOW DISTRICT MENTAL HOSPITAL, Gartloch.—Junior Medical Officer. Salary £200 per annum, with board, lodging, and laundry.

GREAT YARMOUTH HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board, lodging, and washing.

HAMPSTEAD GENERAL AND NORTH-WEST LONDON HOSPITAL.—Surgeon to the Throat, Nose, and Ear Department.

HEMEL HEMPSTEAD, WEST HERTS HOSPITAL.—Resident Medical Officer. Salary £100 per annum, with rooms, board, and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.—Casualty Medical Officer. Salary £200 per annum, with luncheon. Also House Surgeon, unmarried, for six months. Salary £30, with board and residence.

HUDDERSFIELD ROYAL INFIRMARY.—Junior Assistant House Surgeon. Salary £80 per annum, with board, residence, and washing.

HULL ROYAL INFIRMARY.—Casualty House Surgeon for six months. Salary at rate of £80 per annum, with board and lodging.

HULL, VICTORIA CHILDREN'S HOSPITAL, Park-street.—House Surgeon. Salary £50 per annum, with board and laundry. Or Assistant House Surgeon. Salary £45 per annum, with board and laundry.

INDIA OFFICE, London, S.W.—Dentists for British Troops in India.

INDIAN MEDICAL SERVICE.—Commissions in His Majesty's Indian Medical Service.

KENSINGTON AND FULHAM GENERAL HOSPITAL, Earl's Court, S.W.—Resident Medical Officer. Salary at rate of £50 per annum, with board and laundry.

LADY MARGARET HOSPITAL, Bromley, Kent.—Gynæcologist and Anæsthetist. Salary 20 guineas and 10 guineas.

LANCASHIRE EDUCATION COMMITTEE.—School Medical Inspector. Salary £350 per annum.

LEEDS INFECTIOUS DISEASES HOSPITALS AND SANATORIUM FOR TUBERCULOSIS.—Assistant Medical Officer, unmarried. Salary at rate of £130 per annum, with board, lodging, and washing.

LEEDS PUBLIC DISPENSARY.—Honorary Physician. Honorary Surgeon, Honorary Surgeon to the Eye Department, and Honorary Pathologist.

LIVERPOOL, LEASOWE SANATORIUM HOSPITAL FOR SURGICAL TUBERCULOSIS IN CHILDREN.—Resident Medical Officer, unmarried. Salary £150 per annum, with board and residence.

LIVERPOOL STANLEY HOSPITAL.—Two House Physicians. Salary £75 per annum each, with board, residence, and laundry.

LONDON HOMŒOPATHIC HOSPITAL, Great Ormond-street, and Queen-square, Bloomsbury, W.C.—Assistant Surgeon for Diseases of the Throat, Nose, and Ear. Also Anæsthetist. Salary £50 per annum. Also Resident Medical Officer. Salary at rate of £80 per annum, with board, apartments, and laundry.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Anæsthetist. Salary at rate of 25 guineas per annum.

MACCLESFIELD GENERAL INFIRMARY.—House Surgeon. Salary £125 per annum, with board and residence.

MAIDSTONE, KENT COUNTY ASYLUM.—Fourth Assistant Medical Officer, unmarried. Salary £200 per annum, with quarters, attendance, washing, &c.

MANCHESTER ROYAL INFIRMARY.—Medical Officer for Out-patients and Accidents for six months. Salary at rate of £100 per annum, with board and residence.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officers, unmarried. Salaries: Second Assistant Medical Officer, £210 per annum; Third Assistant Medical Officer, £180 per annum, with board, lodging, and washing in each case.

MILE END OLD TOWN, HAMLET OF.—Junior Assistant Medical Officer. Salary £140 per annum, with board, lodging, and washing.

MILLER GENERAL HOSPITAL FOR SOUTH-EAST LONDON, Greenwich-road, S.E.—Honorary Assistant Ophthalmic Surgeon. Also Honorary Physician.

MILROY LECTURES ON STATE MEDICINE AND PUBLIC HEALTH.—Milroy Lecturer for 1915.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury.—Pathologist. Salary £250 per annum.

NEWCASTLE-UPON-TYNE CITY ASYLUM, Gosforth.—Junior Assistant Medical Officer, unmarried. Salary £160 per annum, with apartments, board, and laundry.

NORTHAMPTON GENERAL HOSPITAL.—Senior Resident Medical Officer, unmarried. Salary £120 per annum, with apartments, board, washing, attendance, &c.

NORWICH, JENNY LIND HOSPITAL FOR CHILDREN.—Resident Medical Officer (female) for six months. Salary £50 per annum, with board, apartments, and laundry.

NOTTINGHAM GENERAL DISPENSARY.—Resident Surgeon, unmarried. Salary £220 per annum, with apartments, attendance, light, and fuel.

OXFORD COUNTY ASYLUM, Littlemore, near Oxford.—Assistant Medical Officer. Salary £200 per annum, with apartments, board, and washing.

PARIS, BRITISH HOSPITAL.—Resident House Surgeon, unmarried. Salary £100 per annum, with board, residence, and laundry.

PORTSMOUTH ROYAL HOSPITAL.—House Physician for six months. Salary £30 per annum, with board, &c.

RICHMOND, SURREY, ROYAL HOSPITAL.—Assistant House Surgeon. Salary £70 per annum, with board, apartments, and washing.

ROCHDALE INFIRMARY.—Senior House Surgeon, unmarried. Salary £110 per annum, with board, residence, and laundry.

ROYAL EAR HOSPITAL, 42 and 43, Dean-street, Soho, London.—House Surgeon. Salary £40 per annum.

ROYAL EYE HOSPITAL, Southwark, S.E.—Junior House Surgeons for six months. Salary £70 and £50 per annum respectively, with board and residence.

ROYAL FREE HOSPITAL, Gray's Inn-road, W.C.—Assistant Surgeon.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—Resident Medical Officer for six months. Salary at rate of £120 per annum, with board, lodging, and washing.

ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN, Plaistow, E.—Junior Resident Medical Officer for six months. Salary at rate of £70 per annum, with residence, board, and laundry.

ST. THOMAS'S HOSPITAL.—Resident Assistant Physician.

SMETHWICK, CORNWALL WORKS DISPENSARY.—Assistant Medical Officer.

SOUTHAMPTON, FREE EYE HOSPITAL.—House Surgeon. Salary £100 per annum, with board, lodging, and laundry.

TAUNTON, SOMERSET AND BATH ASYLUM, Cotford.—Assistant Medical Officer, unmarried. Salary £200 per annum, with apartments, board, washing, attendance, &c.

UNIVERSITY OF LONDON.—Examiners.

WALSALL AND DISTRICT HOSPITAL.—Assistant House Surgeon. Salary £100 per annum, with board, residence, and laundry.

WEST AFRICAN MEDICAL STAFF.—Appointments. Salary £400 per annum. WEST INDIES.—TRINIDAD: Supernumerary Medical Officer. Salary £250 per annum and quarters. BRITISH HONDURAS: Two Assistant Medical Officers. Salary £350 per annum. LEEWARD ISLANDS: Supernumerary Medical Officer. Salary £250 per annum.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, PARALYSIS, AND EPILEPSY, 73, Welbeck-street, W.—Resident House Physician for six months. Salary at rate of £80 per annum.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician for six months. Board, lodging, and laundry.

WESTERN OPHTHALMIC HOSPITAL, Marylebone-road, W.—Honorary Assistant Surgeon.

WILLESDEN URBAN DISTRICT COUNCIL ISOLATION HOSPITAL, Neasden.—Assistant Medical Superintendent, unmarried. Salary £300 per annum, with board, lodging, and washing.

WORCESTER GENERAL INFIRMARY.—Resident Medical Officer. Salary £150 per annum, with board, residence, and washing. Also Clinical Assistant and Dispenser. Salary £80 per annum, with board, residence, and washing.

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THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Acts at Dollar, in the county of Clackmannan; at Sidcup, in the county of Kent; and at Whitby, in the county of York.

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*** The summary of vacant appointments, published weekly in this column, is, equally with other articles, the literary copyright of the Proprietors of THE LANCET.

# Births, Marriages, and Deaths.

## BIRTHS.

LEGGE.—On Nov. 22nd, at Cannon-place, Hampstead, the wife of Thomas M. Legge, M.D., of a son.

UNITT.—On Nov. 21st, at Quorn, Leicestershire, the wife of James Arthur Unitt, L.R.C.P., M.R.C.S., of a son.

## MARRIAGES.

ENGLISH—SAMPSON.—On Nov. 20th, at Lenton Parish Church, Howard English, M.D., F.R.C.S., to Flora, daughter of Walter Sampson, The Park, Nottingham.

JOHNSTON—TYERS.—On Nov. 24th, 1913, at Christ Church, Hampstead, by the Vicar, the Rev. G. E. Deacon. M.A., J. E. L. Johnston, M.B., B.S. Lond., D.T.M. & H. Cantab., West African Medical Staff, son of Mr. J. C. Johnston, Madras Public Works (retired), to Gertrude Mabel, daughter of Mr. J. E. Tyers, Umaria, Central India.

MACKIE—BALL.—On Nov. 22nd, at St. Paul's Cathedral, Calcutta, Captain F. Percival Mackie, I.M.S., to Gladys May, younger daughter of W. J. Ball, Upper Belgrave-road, Clifton, Bristol.

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*N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

# Notes, Short Comments, and Answers to Correspondents.

## PLAGUE AND LEPROSY IN NEW CALEDONIA.

REPORTING on the affairs of the island of New Caledonia, the French penal settlement in the Pacific Ocean, the British Consul (Mr. W. J. Holmes) states that the population at the last Census consisted of 19,319 whites (including 5671 convicts), 3214 Asiatics, and 28,075 natives. Sporadic cases of plague are now almost of yearly occurrence in the island, but on Sept. 17th, 1912, there was an outbreak of the disease at Noumea which threatened to assume serious proportions. The authorities, however, adopted energetic measures, the rate of infection soon slackened, and the epidemic came to an end in a little over three months. There were 62 cases in all, of which 34 were Europeans and 28 natives and Asiatics. Of the former 14 died, and of the latter 26, the percentages being respectively 41·17 and 92·85. Only three cases were in females—i.e., two white women and one native child. Most of the white men attacked were old convicts addicted to drink. All persons attacked were inoculated with Yersin's serum, and as a preventive measure some 2000 people were inoculated with Haffkine's prophylactic fluid. Twelve cases also occurred in the interior between Hailo and Bourail. The epidemic is said to have cost the colony £6000.

Leprosy is still very prevalent among the natives of the island and its dependencies, but cases among the whites and Asiatic immigrants are by no means rare.

## A LETTER FROM LISTER.

THE Galen Manufacturing Company, Limited, have sent us a copy of an original letter now in their possession which was received by John Milne from Lord Lister in December, 1877, and which deals with a form of antiseptic dressing that Lister contemplated introducing:—

"DEAR SIR,—I have despatched this evening to you, addressed to the infirmary, a pound of a new material for making the gauze, to take the place of the carbolic acid. It is called thymol.

In preparing the 'thymol gauze' no paraffin is used but spermaceti instead, and only a small quantity of resin, as follows: 500 parts spermaceti, 50 parts resin, 16 parts thymol. Will you please charge some gauze for me, enough to use up the whole thymol—that is, you will require of spermaceti 500 oz., or 31 lb. 4 oz.; of resin 50 oz., or 3 lb. 2 oz.; of thymol 16 oz., or 1 lb.

Will you please melt first the spermaceti and resin and mix these, and then stir in the thymol, just as you used to do the carbolic acid, and prepare the gauze in the old machine (the hot box). Please do this with as little delay as possible and send the 'thymol gauze' to me in a tin box as soon as possible. Yours truly,

JOSEPH LISTER."

## THE CASE OF MR. H. T. HAMILTON.

*To the Editor of* THE LANCET.

SIR,—To the sum of £61 12*s.* already acknowledged for this fund I have now to add the following: Dr. Gouldesbrough, Welbeck-street, £1 1*s.*

I am, Sir, yours faithfully,

W. H. GIMBLETT, M.D.

86, Sutherland-avenue, Maida Vale, W., Nov. 25th, 1913.

## A SHAM MIRACLE.

A LOCAL correspondent writes that the press has been making a great feature of the wonderful story of a young girl from a village near Amiens. By some she was said to be inspired of heaven, by others, of the devil. When any question was put to her she remained silent a while, and after a few moments there were seen on the skin of her arm or her thigh words formed by raised lines on the skin, which appeared spontaneously and purported to give an answer to the question asked. People came from long distances to consult her. She predicted the future and gave advice, always by means of these answers shown on her skin. When she came to Paris a committee of medical men was sent by the newspapers to investigate the facts. It was found after all to be an ordinary case of dermatographia, exploited by the subject. It was noticed that the letters appeared only on regions accessible to her right hand. One of the persons present, more suspicious than the rest, forced her to open her right hand, and found hidden there a hair-pin with which she herself traced the letters on the skin. As occurs in all cases of dermatographia, the letters thus traced were followed by a line of cutaneous œdema.

## MUNIFICENT BEQUESTS TO BELFAST HOSPITALS.

ONE of the great merchants of Belfast—Mr. John Hogg—who died about a month ago, has by his will bequeathed £5000 to the Royal Victoria Hospital, Belfast, £2000 to the Forster Green Hospital, and £1000 each to the following hospitals: The Ulster Hospital for Women and Children, the Belfast Hospital for Sick Children, the Samaritan Hospital, and the Ulster Eye, Ear, and Throat Hospital. Mr. Hogg has also left £1000 to the Society for Providing Nurses for the Sick Poor, and the same amount to the Ulster Institution for Deaf, Dumb, and Blind, to the Homes of Rest, Bangor, and to the Edgar Home; while to various schemes of the Presbyterian Church in Ireland he has willed a total of £25,000. Altogether for religious and charitable purposes Mr. Hogg has left the large sum of £40,000.

## THE MEDICAL PROFESSION IN WESTERN CANADA.

*To the Editor of* THE LANCET.

SIR,—Your reply to A.B.C. in your columns recently leads me to somewhat expand your advice to the intending young British practitioner in Western Canada. Most young Canadian medical men early acquire a good knowledge of the world and a business education before entering on professional life, and their very success in qualifying under difficulties is evidence of their determination and industry and of the capacity for "getting there," which is the most valued faculty in the Western continent. There are excellent operating surgeons in Victoria. Not all the English practitioners are near the forefront, though there are one or two who hold their own against native talent, and perhaps the leading surgeon is a London man. Like most towns on the Western continent, Victoria, which is on Vancouver Island, is somewhat overstocked with doctors. It is the Bournemouth or Torquay of Canada. Vancouver, on the mainland, 60 miles off, is very wet, and the snow lies very deep in the winter. The expenses of living in Canada are very high, about double those at home, and life especially away from a large town is rougher and in some respects less comfortable. Life is easier in Victoria, but very expensive. Everything depends upon the adaptability, and throughout the Western continent medical men who make large incomes owe it frequently rather to successful speculation, especially in land, or to some external pursuit, than to their professional returns.

I am, Sir, yours faithfully,

M.D.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

## A DIARY OF CONGRESSES.

THE following Congresses, Conferences, and Exhibitions are announced.

**In 1913:—**

Nov. 24th–29th (Olympia).—Cycle, Motor-cycle, and Cycle-car Exhibition.

Dec. 16th–20th (Aberdeen).—Red Cross and National Health Service Exhibition.

**In 1914:—**

April 14th–18th (New York).—Fourth Congress of the International Surgical Society.

„ 20th–23rd (Wiesbaden).—Thirty-first German Congress for Internal Medicine.

May 1st–Nov. 1st (Lyons).—International Town Life Exhibition.

July 6th–11th (Blackpool).—Twenty-ninth Congress of the Royal Sanitary Institute.

„ 8th–13th (Edinburgh).—Congress of the Royal Institute of Public Health.

Aug. 3rd–8th (London).—Sixth International Dental Congress.

„ 10th–15th (St. Petersburg).—Twelfth International Congress of Ophthalmology.

Sept. 7th–12th (Berne).—International Congress for Neurology, Psychiatry, and Psychology.

September (Vienna).—Third International Congress for Diseases of Occupation.

(London).—Anglo-American Exhibition.

(Aberdeen).—Eighty-second Annual Meeting of the British Medical Association.

(Auckland, N.Z.).—Australasian Medical Congress.

(St. Petersburg).—Third Mendeléeff Congress of Pure and Applied Chemistry and Physics.

**The following journals, magazines, &c., have been received:—** Bulletin of the Johns Hopkins Hospital, Journal of Tropical Medicine and Hygiene, Surgical Clinics of Dr. John B. Murphy (Chicago), Transactions of the Society of Tropical Medicine and Hygiene, American Journal of Obstetrics, Interstate Medical Journal, Medical Review of Reviews, South African Nursing Record, South African Medical Record, Mercy and Truth, Journal of Obstetrics and Gynæcology of the British Empire, Dublin Journal of Medical Science, Modern Hospital, Annali di Medicina Navale e Coloniale, Medical Chronicle, Canadian Medical Association Journal, St. Thomas's Hospital Gazette, St. Mary's Hospital Gazette, Guy's Hospital Gazette, &c.

# Medical Diary for the ensuing Week.

## SOCIETIES.

**ROYAL SOCIETY**, Burlington House, London, W.

THURSDAY.—Sir Francis Darwin: (1) On a Method of Studying Transpiration; (2) The Effect of Light on the Transpiration of Leaves.—Prof. J. B. Farmer and Mr. L. Digby: On Dimensions of Chromosomes considered in Relation to Phylogeny.—Mr. J. H. Mummery: The Process of Calcification in Enamel and Dentine (communicated by Prof. J. Symington).—Mr. A. Compton: The Optimum Temperature of Salicin Hydrolysis by Enzyme Action is Independent of the Concentrations of Substrate and Enzyme (communicated by Sir J. R. Bradford, secretary to the Royal Society).—Mr. C. F. U. Meek: The Ratio Between Spindle Lengths in the Spermatocyte Metaphases of Heliae Pomatia (communicated by Sir W. T. Thiselton-Dyer).—Dr. A. P. Laurie, Mr. W. F. P. McLintock, and Mr. F. D. Miles: Egyptian Blue (communicated by Sir Arthur Church).

**ROYAL SOCIETY OF MEDICINE**, 1, Wimpole-street, W.

WEDNESDAY.

SECTION OF THE HISTORY OF MEDICINE (Hon. Secretaries—Raymond Crawfurd, D'Arcy Power): at 5 P.M.

*Papers:*

Dr. Raymond Crawfurd: Martial and Medicine.

Dr. J. D. Rolleston: Medicine in the Greek Anthology (Part II.).

An exhibit will be made of Objects of Medical and Surgical Antiquarian Interest by Mr. C. J. S. Thompson from the Historical Medical Museum of Mr. Henry Wellcome.

SECTION OF OPHTHALMOLOGY (Hon. Secretaries—J. Herbert Parsons, Leslie Paton): at 8 P.M.

*Cases and Specimens:*

Mr. J. Herbert Parsons: Specimens of Experimental Glasses prepared by Sir William Crookes, O.M., F.R.S.

*Papers* (at 8.30 P.M.):

Mr. N. Bishop Harman: An Operation to Improve the Effect of an Artificial Eye.

Mr. W. M. Beaumont: Iritis, Rheumatic and Toxæmic.

Dr. Gordon Holmes and Mr. R. A. Greeves: Sarcoma of Choroid with Extensive Secondary Dissemination.

THURSDAY.

SECTION OF BALNEOLOGY AND CLIMATOLOGY (Hon. Secretaries—Chas. W. Buckley, J. Campbell McClure): at 5.30 P.M.

Dr. Guy Hinsdale: Mineral Springs, their Analyses and Newer Methods of Application, &c., with a Note on Radio-activity of Mineral Waters.

(At 7.15 P.M. the Members will dine together at the Welbeck Palace Hotel, Welbeck-street, W. The charge for the dinner is 4s. each, and Members may bring guests. Members who wish to dine are requested to send their names to Dr. J. Campbell McClure, 41, Welbeck-street, W.)

SECTION OF OBSTETRICS AND GYNÆCOLOGY (Hon. Secretaries—T. Watts Eden, C. Hubert Roberts): at 8 P.M.

*Specimens:*

Mr. Alban Doran: An Occluded Vagina After Total Hysterectomy.

Mr. J. D. Malcolm: Sloughing Fibroid with Complete Inversion of the Uterus.

Dr. G. G. Alderson: Chrobak's Instrument for Embryotomy.

Dr. Wilberforce Smith: Epidiascope Demonstration on Disappearance of Altmann's Granules in Carcinoma Cervicis.

Mr. Gordon Luker: Hydatidiform Mole and Normal Ovum in Twin Pregnancy.

*Short Communications:*

Dr. H. R. Spencer: Case of Primary Cancer of Bartholin's Gland.

Mr. Victor Bonney: (1) Case of Pre-eclampsia at the Twenty-fourth Week Treated by Cæsarean Section; (2) Case of Cæsarean Myomectomy with Remarks on the Operation.

*Papers:*

Mr. Beckwith Whitehouse: The Relation of Syphilis to the Uterus.

Dr. M. G. Stewart: Case of Fœtus Acardiacus Amorphus.

FRIDAY.

SECTION OF LARYNGOLOGY (Hon. Secretaries—E. A. Peters, Cecil I. Graham): at 4 P.M.

*Cases:*

The President (Dr. D. R. Paterson): Extraction from the Bronchi of Three Foreign Bodies, the Colour of which made Removal Difficult.

Dr. W. Hill: (1) Epidiascope exhibition of Skiagrams of Pharyngeal Diverticula; (2) Patient from whom a Post Cricoid Diverticulum has been Removed.

Mr. Layton: (1) Carcinoma of Œsophagus, Gastrostomy, Disappearance of Secondary Deposits, Bilateral Abductor Paresis; (2) Two Cases of Bilateral Abductor Paralysis.

Mr. A. J. Wright: Specimen of Thyroglossal Cyst which Caused Dyspnœa in a Woman aged 54.

Mr. G. Potts: Laryngeal Case for Diagnosis.

Dr. E. A. Peters: Early Pachydermia of Larynx.

And other Cases.

SECTION OF ANÆSTHETICS (Hon. Secretaries—H. E. G. Boyle, Cecil Hughes): at 8.30 P.M.

*Paper:*

Dr. A. L. Flemming: Review of Inquests concerning Deaths during Anæsthesia 1910-1913.

SECTION OF PATHOLOGY (Hon. Secretaries—Gordon W. Goodhart, C. Price-Jones): at 8.30 P.M.

*Laboratory Meeting* at the Royal Army Medical College, Grosvenor-road, S.W.

**RÖNTGEN SOCIETY**, Institution of Electrical Engineers, Victoria Embankment, W.C.

TUESDAY.—8.15 P.M., Papers: Dr. Hampson, Prof. W. G. Duffield, and Mr. T. Murray: Sterilisation of Milk by Electrified Gas. Mr. C. E. S. Phillips will exhibit and describe Some New Radium-emanation Applicators.

**NORTH-EAST LONDON CLINICAL SOCIETY**, Prince of Wales's Hospital, Tottenham, N.

THURSDAY.—4.15 P.M., Clinical Meeting.

**CHILD STUDY SOCIETY, LONDON**, Royal Sanitary Institute, 90, Buckingham Palace-road, S.W.

THURSDAY.—7.30 P.M., Mr. P. B. Ballard: Left-Handedness.

**WEST LONDON MEDICO-CHIRURGICAL SOCIETY**, West London Hospital, Hammersmith-road, W.

FRIDAY.—8 P.M., Cases will be shown. 8.30 P.M., Paper:—Mr. J. E. R. McDonagh: The Biology of Syphilis (illustrated by lantern slides). Followed by a discussion.

## LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

**ROYAL COLLEGE OF SURGEONS OF ENGLAND**, Lincoln's Inn Fields, W.C.

FRIDAY.—5 P.M., Mr. G. H. Makins: Gunshot Wounds. (Bradshaw Lecture.)

**MEDICAL GRADUATES' COLLEGE AND POLYCLINIC**, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Dr. J. L. Bunch: Clinique (Skin). 5.15 P.M., Lecture:—Dr. W. Gilliatt: Tubercular Disease of the Female Generative Organs.

TUESDAY.—4 P.M., Dr. C. E. Lakin: Clinique (Medical). 5.15 P.M., Lecture:—Dr. W. P. S. Branson: Some Pseudo-Physical Diseases.

WEDNESDAY.—4 P.M., Mr. R. Howard: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. A. Mantle (Harrogate): The Causes, Symptoms, and Complications of Mucous Colitis, its Treatment by Irrigation of Mineral Waters as done at Plombières and Harrogate.

THURSDAY.—4 P.M., Dr. S. A. K. Wilson: Clinique (Medical). 5.15 P.M., Lecture:—Dr. J. Blumfeld: Anæsthesia in Diagnosis.

FRIDAY.—4 P.M., Mr. G. W. Roll: Clinique (Eye).

**POST-GRADUATE COLLEGE**, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Dr. Simson: Diseases of Women. 10.30 A.M., Medical Registrar: Demonstration of Cases in Wards. 12 noon, Dr. Bernstein: Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Armour: Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Baldwin: Diseases of the Rectum.

TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 10.30 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12 noon, Mr. T. Gray: Demonstration of Fractures, &c. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Baldwin: Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. Dr. Pernet: Diseases of the Skin. 5 P.M., Lecture:—Mr. Baldwin: Diseases of the Rectum.

WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 11 A.M., Mr. Souttar: Demonstration of Minor Operations. 12 noon, Lecture:—Mr. Souttar: Abdominal Diagnosis. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Pardoe: Operations. Mr. B. Harman: Diseases of the Eye. Dr. Simson: Diseases of Women. 5 P.M., Lecture:—Mr. Baldwin: Diseases of the Rectum.

THURSDAY.—10.30 A.M., Dr. Simson: Gynæcological Demonstration. 12.15 P.M., Lecture:—Dr. G. Stewart: Neurological Cases. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Armour: Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Baldwin: Diseases of the Rectum.

FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 10.30 A.M., Lecture:—Dr. Owen: Practical Medicine. 12.15 P.M., Lecture:—Dr. Bernstein: Clinical Pathology. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Baldwin: Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. Dr. Pernet: Diseases of the Skin. 5 P.M., Lecture:—Mr. Baldwin; Diseases of the Rectum.

SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. B. Harman: Diseases of the Eye. 12 noon, Lecture:—Mr. Souttar: Surgical Anatomy of the Abdomen. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Pardoe: Operations.

**LONDON SCHOOL OF CLINICAL MEDICINE**, Dreadnought Hospital, Greenwich.

MONDAY.—Out-patient Demonstrations:—10 A.M. Dr. Singer: Medical. Mr. H. Curtis: Surgical. 12 noon, Mr. G. N. Bigg: Throat, Nose, and Ear.——2.15 P.M., Mr. W. Turner: Surgery. 3 P.M., Mr. W. Turner: Operations. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4.15 P.M., Mr. R. Lake: Ear and Throat.

TUESDAY.—Out-patient Demonstrations:—10 A.M., Dr. G. Holmes: Medical. Mr. Cole: Surgical. 12 noon, Dr. H. MacCormac: Skin.——2 P.M., Mr. L. McGavin: Operations. 2.15 P.M., Mr. R. Carling: Surgery. 3.15 P.M., Dr. G. Rankin: Medicine. 2.15 P.M., Lecture:—Mr. R. Carling: Gallstones.

WEDNESDAY.—Out-patient Demonstrations: 10 A.M., Dr. F. Langmead: Medical. Mr. Cecil Rowntree: Surgical. 11 A.M., Mr. R. B. Bickerton: Eye.——2 P.M., Mr. L. V. Cargill or Mr. Choyce: Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.15 P.M., Mr. Cargill: Eye Clinique. 4.30 P.M., Mr. C. C. Choyce: Surgery. 3.15 P.M., Special Lecture:—Mr. L. V. Cargill: Difficulties in Ophthalmic Diagnosis.

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FRIDAY.—Out-patient Demonstrations:—10 A.M., Dr. G. Holmes: Medical. Mr. Cole: Surgical. 12 noon, Dr. H. MacCormac: Skin.—2 P.M., Mr. L. McGavin: Operations. 2.15 P.M., Sir John Rose Bradford: Medicine 3.15 P.M., Mr. L. McGavin: Surgery.

SATURDAY.—Out-patient Demonstrations: 10 A.M., Dr. F. Langmead: Medical. Mr. Cecil Rowntree: Surgical. 11 A.M., Mr. R. B. Bickerton: Eye.—10 A.M., Col. Barry: Radiography.

**NORTH-EAST LONDON POST-GRADUATE COLLEGE**, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10.30 A.M., Surgical Out-patient (Mr. R. Gillespie). 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Nose, Throat, and Ear (Mr. H. D. Gillies). 3 P.M., Clinical Pathology and Pathological Demonstration (Dr. W. H. Duncan).

TUESDAY.—2 P.M., Demonstration:—X Ray Treatment and Ionic Medication (Dr. Metcalfe). 2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. Howell Evans); Gynæcological (Dr. A. E. Giles). 3 P.M., Surgery of the Chest (Mr. Gillespie). 4.30 P.M., Lantern-Demonstration illustrating Affections of the Breast (Mr. Howell Evans)

WEDNESDAY.—Clinics:—2 P.M., Throat Operations (Mr. Gillies). 2.30 P.M., Children's Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen); Eye (Mr. R. P. Brooks). 3 P.M., X Rays (Mr. W. Steuart); Clinical Pathology and Pathological Demonstration (Dr. W. H. Duncan). 5.30 P.M., Eye Operations (Mr. Brooks).

THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. E. Giles). Clinics:—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. Carson). 3 P.M., Medical In-patient (Dr. G. P. Chappel).

FRIDAY.—2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. E. Gillespie); Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. E. M. Leslie); Clinical Pathology and Pathological Demonstration (Dr. W. H. Duncan).

**LONDON HOSPITAL MEDICAL COLLEGE** (UNIVERSITY OF LONDON), Clinical Theatre, London Hospital, Mile End-road, E.

Course of Lectures on the Neuroses and Psychoses of Children:—

TUESDAY.—2 P.M., Dr. F. Warner: Motor Characters of Brain Observed and Described.

**HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST**, Brompton, S.W.

WEDNESDAY.—4.30 P.M., Lecture:—Dr. Bosanquet: Tuberculosis as an Infective Disease.

**NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC**, Queen-square, Bloomsbury, W.C.

TUESDAY.—3.30 P.M., Clinical Lecture:—Dr. G. Stewart: Disseminated Sclerosis.

FRIDAY.—3.30 P.M., Clinical Lecture:—Dr. G. Stewart: Cerebro-spinal Syphilis.

**THE THROAT HOSPITAL**, Golden-square, W.

MONDAY.—5.15 P.M., Special Demonstration of Selected Cases.

THURSDAY.—5.15 P.M., Clinical Lecture.

**ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN**, 49, Leicester-square, W.C.

TUESDAY.—2 P.M., Dr. W. Griffith: Pathology of the Epidermis.

THURSDAY.—6 P.M., Dr. M. Dockrell: Paratuberculides (due to Tuberculous Toxins)—I., Macular; II., Papular; III., Pustular; IV., Pigmentary.

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WEDNESDAY.—ROYAL INFIRMARY—4.30 P.M., Mr. E. D. Telford: Flat-foot.

THURSDAY.—ANCOATS HOSPITAL—4.30 P.M., Mr. W. R. Douglas: Surgical Aspects of Dyspepsia.

FRIDAY.—ROYAL EYE HOSPITAL—4.30 P.M., Dr. T. M. Bride: Congenital Abnormalities.

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TUESDAY.—SHEFFIELD ROYAL HOSPITAL.—3 P.M., Mr. G. Wilson: Diagnosis and Treatment of Tubercular and other Glandular Enlargements.

FRIDAY.—SHEFFIELD ROYAL HOSPITAL.—3 P.M., Dr. Henry: Tuberculin in Diagnosis and Treatment.

**UNDA HOSPITAL POST-GRADUATE COURSES**, Dublin.

MONDAY.—10 A.M., Obstetrical Lecture: Abortion. 11 A.M., Examination of Patients and Minor Operations.

TUESDAY.—10 A.M., Major Operations.

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THURSDAY.—10 A.M., Major Operations.

FRIDAY.—10 A.M., Gynæcological Lecture: Special Lecture on Gynæcological Pathology. 11 A.M., Examination of Patients and Minor Operations.

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THE LANCET Office, Nov. 26th, 1913.

| Date. | Barometer reduced to Sea Level and 32° F. | Direction of Wind. | Rainfall. | Solar Radiation Vacuo. | Maximum Temp. Shade. | Min. Temp. | Wet Bulb. | Dry Bulb. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|
| Nov. 20 | 30·16 | S.W. | ... | 60 | 55 | 43 | 47 | 51 | Overcast |
| ,, 21 | 29·84 | S.W. | 0·03 | 59 | 55 | 51 | 51 | 53 | Overcast |
| ,, 22 | 30·26 | N. | 0·69 | 64 | 48 | 41 | 40 | 41 | Fine |
| ,, 23 | 30·27 | E. | ... | 50 | 47 | 37 | 39 | 40 | Foggy |
| ,, 24 | 30·00 | S.W. | ... | 68 | 51 | 40 | 44 | 46 | Cloudy |
| ,, 25 | 30·20 | S.W. | ... | 62 | 53 | 43 | 43 | 43 | Cloudy |
| ,, 26 | 30·25 | S.W. | ... | 62 | 55 | 43 | 50 | 52 | Overcast |

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